
CHAPTER 9

BIOLOGICAL RESOURCES

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9.1 SETTING

The DeWitt Center Study Area is approximately 80 percent developed. The majority of natural habitat onsite is comprised of approximately 16.25 acres of oak woodland in the southwest corner of DeWitt Center, with smaller natural habitat areas located in the northeastern corner and along the southern property boundary. Since DeWitt Center has been partially developed and in constant use since the mid 1940s, most of the natural habitats onsite have been subjected to considerable and ongoing disturbance.

Previous Studies

A number of biological studies have been conducted within the DeWitt Center Study Area prior to preparation of this EIR, encompassing either the entire property or selected portions. Within the past five years, four DeWitt Center Study Area biological studies have been conducted.

In 2001, North Fork Associates conducted a biological resources assessment for the Placer County Detention Facility, Main Jailhouse #4, and prepared a *Biological Resources Assessment Report* (January 8, 2001) and a *Supplement to the Biological Resources Assessment Report* (January 29, 2001). These investigations included a general biotic and habitat characterization and a wetland delineation, as well as a special status plant and animals species evaluation for the area around the Main Jail.

In 2002, North Fork Associates completed a general biological assessment of the DeWitt Center Study Area, including identification and mapping of habitat types present onsite, delineation of wetland resources, and preliminary assessments of the possibility of the area to support special status plant and animal species. Results of this assessment were presented in the *DeWitt Center Existing Conditions Report and Appendix* (September 2002). Also in 2002, Yamasaki Landscape Architecture prepared an Arborist Report for the existing trees at the proposed Land Development Building site, with a follow up tree survey conducted by North Fork Associates in 2003. The North Fork Associates tree survey included the proposed Children's Emergency Shelter and Women's Center sites. Results from the 2002 studies, as well as studies conducted in the spring of 2003 are the basis for analysis within this EIR.

Additionally, Gibson and Skordal conducted red-legged frog surveys for the DeWitt Center Study Area in August 2003 and for the property immediately south of DeWitt Center in spring of 2002. No red-legged frogs were found on either property. ~~Upon completion of the report documenting this survey by Gibson and Skordal, a copy of the report will be available for review at the Placer County Department of Facility Services office located at 11476 C Avenue in DeWitt Center (Auburn, CA 95603).~~ **is provided in Appendix D of this EIR.**

Habitats

Habitat types are areas that support a similar and somewhat predictable set of plants and animals. Habitat types present onsite are specifically defined below. Habitat types across the ±180 acre project area range in condition from highly disturbed to relatively undisturbed. Habitat in the western portion of the area, including the ±16.25 acres of oak woodland and ±2.6 acres of open water pond and associated wetlands, is relatively natural. The open water ponds

were originally created as discharge areas for the decommissioned wastewater treatment plant in the central portion of DeWitt Center. With the decommissioning of the wastewater treatment plant, the open water ponds have converted into naturalized habitat areas. However, because DeWitt Center has been partially developed and in near constant use for so many years, the study area has been subjected to considerable disturbance, which has affected the quality of many of these habitat areas. The primary disturbance has come as a result of the dumping of large concrete rubble, other construction debris, and landscaping wastes (stumps, tree limbs and slash, leaves, and grass clippings). Some of the concrete rubble and construction debris was dumped many years ago and is partially overgrown with vegetation.

Other undeveloped habitats include the ± 5.5 acre pasture in the northwest corner of the site, ± 10.1 acres of ruderal shrub and annual grassland scattered throughout the site (ruderal habitats are those which have been or continue to be subjected to disturbance), ± 0.2 acres of wetland swales, and ± 1.5 acres of riparian wetland and upland. Natural habitats encompass ± 40 acres of the DeWitt Center Study Area (NFA/URS, 2002). *Figure 9-1* provides a map of the habitat areas onsite.

Developed Areas

One-hundred and forty acres of the study area have been categorized as urban landscape. This includes all those parts of DeWitt Center that are developed or disturbed to the point that they generally provide no significant habitat value, except for urban wildlife, such as squirrels and some passerine songbirds, which tolerate and even thrive in developed areas. Within the urban areas, DeWitt Center supports ± 22 acres of areas landscaped with mowed grasses and planted trees and shrubs that provide limited habitat value for these types of animals.

There is a landscaped parkway that runs along the northern border of the property, south of Bell Road and along both sides of A Avenue. The proposed Land Development Building (LDB) site is situated within a portion of this landscaped area. The area is primarily mowed grass with rows of very large introduced trees, including Liquidambar, London plane tree, and several ornamental pines. This area provides habitat to a variety of passerine bird species that can tolerate the extensive human presence. There are several other landscaped areas of lesser size throughout DeWitt Center, with and without trees and/or shrubs. In most instances, these consist of mowed grassy areas with no significant habitat value.

Ruderal

Ruderal habitats within the DeWitt Center Study Area are either in a constant state of disturbance, or consist of previously disturbed lands in the process of reverting to a vegetated or natural habitat condition. These areas are in various stages of vegetative succession, primarily annual grasslands and shrub habitats. They can be dominated by non-native grass species, dominated by shrubs and very small trees, or contain a mixture of both. Herbaceous species present in ruderal habitats include Italian ryegrass, annual bluegrass, blue wildrye, wild oats, yellow star thistle, medusa-head grass, chickweed, filaree, soft brome, and ripgut brome. Common shrub species include buckbrush, whiteleaf manzanita, coyote brush, coffeeberry, Himalayan blackberry, and pyracantha. These ruderal vegetative communities provide habitat or foraging opportunities for several species of reptiles, birds, and small mammals. During the 2002 surveys, species observed in ruderal habitats of the study area included ring-necked pheasant, California quail, killdeer, mourning dove, Anna's hummingbird, American robin,

European starling, Brewer's blackbird, several species of sparrows, and black-tailed jackrabbit. In addition, white-tailed kite, red-tailed hawk, and red-shouldered hawk were observed foraging in the ruderal areas. Tracks of black-tailed mule deer, raccoon, and unidentified small rodents were also evident in these areas.

Oak Woodland

This habitat, located in the southwestern portion of the study area, is characterized by a predominance of native oak trees in high numbers relative to other tree species and a moderate canopy cover. The woodland includes both blue oak and interior live oak with a scattering of foothill pine. Many of the oaks, in particular the blue oaks, are of substantial size and age. Of special note is a blue oak that is marked as being between 250 and 300 years in age. Its location has been noted on *Figure 9-1 Habitat Map*. In some areas, other tree species, including incense cedar, cypress, junipers, and other conifers, have been introduced into the oak woodland. Understory species in the oak woodlands consist primarily of buckbrush, whiteleaf manzanita, coyote bush, and a mixture of grasses and forbs similar to those in ruderal areas.

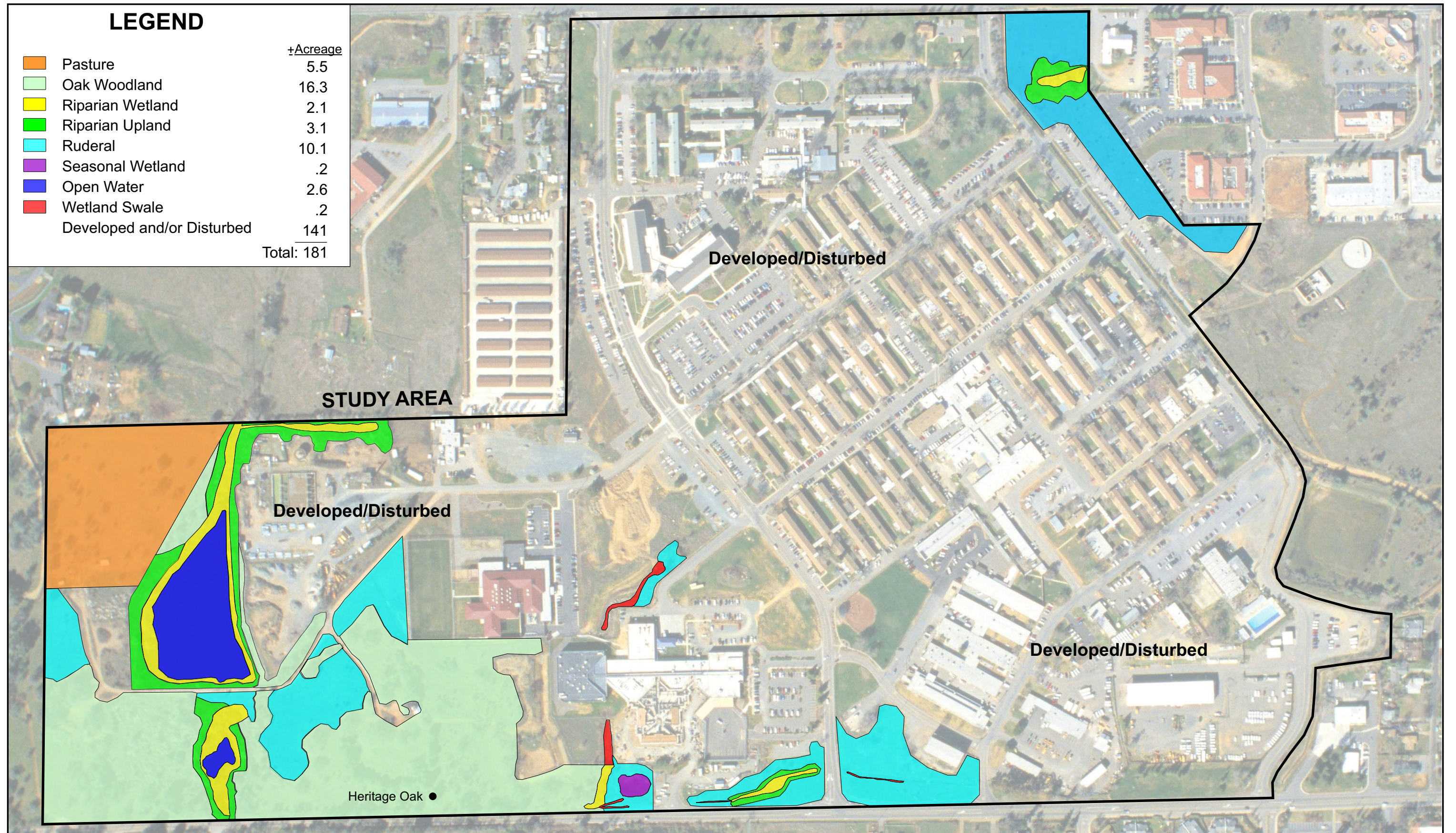
Much of the oak woodland on the property has been disturbed in the past, either through tree and vegetation removal or dumping of debris and concrete rubble. In some of these areas the oaks are mature and the disturbance has primarily affected the understory. In some areas, most notably to the west of the smaller of the two ponds on the site, the oaks are small and shrubby as they emerge from amidst piles of debris.

Oak woodland habitat provides food and cover as well as roosting and breeding sites for wildlife. Oak acorns are critical food items for many animals, including western gray squirrel, mule deer, turkeys, other game species, acorn woodpeckers, raccoons, and deer mice. Oak foliage and the shrubby understory attract birds, such as bushtits, white-breasted nuthatches, brown creepers, common titmouse, and western peewee. Many animal species rely on oaks to provide shade, shelter, and breeding sites. Woodpeckers excavate nest-holes in snags (dead trees) or in dead oak limbs. These holes are frequently used by other hole-nesting species. Many birds that forage in grasslands and ruderal areas during the day use the oaks as roosting sites, resting in the trees at night. During the 2002 surveys, red-shouldered and red-tailed hawks and a white-tailed kite were observed roosting in the larger oaks and foraging in nearby ruderal areas. These species could nest here but no nests were observed. Further, the trees provide protection from the weather – many birds spend the hottest part of the summer days in the shade of the oak canopies.

In preparation of this EIR, a tree survey was conducted by North Fork Associates in the western portion of the woodland habitat, which is the proposed site of the Children's Emergency Shelter and Women's Center (CES and WC) projects. This survey found 87 native oak trees within the CES and WC sites. The majority of trees were assessed to have fair health, vigor, and structure. The Yamasaki Arborist Report and the North Fork Associates Tree Assessment report and accompanying tree maps are included in Appendix D of this EIR. *Figure 5-5 in CHAPTER 5, AESTHETICS* shows the trees anticipated to be preserved at the LDB site.

LEGEND

	±Acreage
Pasture	5.5
Oak Woodland	16.3
Riparian Wetland	2.1
Riparian Upland	3.1
Ruderal	10.1
Seasonal Wetland	.2
Open Water	2.6
Wetland Swale	.2
Developed and/or Disturbed	141
Total:	181



0 300
Approximate scale in feet

Figure 9-1

HABITAT MAP
DeWitt Government Center
Facility Plan (2003 - 2010)
Placer County, California

Other Trees

The Yamasaki Arborist Report for the LDB site documents the species, size, and condition of the trees at the LDB site that occur outside of the proposed building footprint and evaluates these trees for preservation. This report found that 32 trees of substantial size exist at the LDB site in areas where they might be preserved. Native trees onsite include three blue oaks and six liquidambars. Other tree species include giant sequoia, silver maple, and camphor tree. The Arborist Report recommends removal of all three blue oaks and five of ten silver maples, while recommending preservation of all other trees documented in this report. A follow up tree assessment conducted by North Fork Associates at the LDB site found that approximately 120 trees of various species with trunk diameter at breast height of approximately six inches or greater exist across the entire site, including areas within the building and parking lot footprint.

Riparian Upland

Riparian upland habitat is associated primarily with the two ponds in the western portion of the DeWitt Center Study Area and other small wetlands along the southern border and in the northeast corners of the area. Riparian upland habitats form the outer boundary of the wetland areas and are dominated by Himalayan blackberry but also include live oak, willows, cottonwoods, pyracantha, and autumn willowweed. A common introduced species in these areas is tree-of-heaven.

This habitat type provides cover, foraging ground, and nesting habitat for many animal species, including yellow-rumped warblers, black phoebe, Anna's hummingbird, song sparrow, white-crowned sparrow, warbling vireo, Brewer's blackbird, red-winged blackbird, California quail, scrub jay, striped skunk, and raccoon. The extended wet period and higher density of vegetation in the riparian areas increases the food base, attracting more animal species than drier habitats.

Pasture

There is a large area intermittently used as pasture for horses in the northwest portion of DeWitt Center. This area consists primarily of non-native grasses and forbs with oak trees scattered throughout. If left idle, the area would probably revert to oak savanna but is sufficiently disturbed to be categorized as pasture. It provides very limited habitat value to a few avian species, such as Brewer's blackbirds, starlings, and crows.

Waters of the United States

The DeWitt Center property discharges water to two watersheds. The northeastern portion of the area drains into the Rock Creek watershed, and the remainder of the area drains to the North Ravine watershed. Two drainages drain the area. The headwaters of North Ravine along the western part of DeWitt Center drains into the abandoned sewer pond and then to the south. A smaller local drainage occurs in the center of the property and drains under the Main Jail facility, south under Atwood Road and into North Ravine. Precipitation falling on the site either sheet flows to the two drainages, is conveyed through stormwater drainage systems associated with the existing onsite development, or flows laterally underground along shallow bedrock to the drainages. Hydrology of the DeWitt Center Study Area is discussed in detail in **CHAPTER 11, HYDROLOGY AND WATER QUALITY.**

North Fork Associates prepared a wetland delineation for the project area in 2002. The delineation has been submitted to the U.S. Army Corps of Engineers, and was verified by the Corps on August 21, 2003. *Figure 9-2* presents the wetland delineation map.

Open Water Pond

DeWitt Center supports two open water ponds, totaling approximately 2.55 acres, in the southwestern portion of the property. These are the remnants of an abandoned sewage treatment pond system. The upper or larger of the two ponds is formed by an earthfill dam or dike with a gated water control structure that releases water to the lower, smaller pond, which is located about 225 feet to the south and about 20 feet lower in elevation than the upper pond. Water currently enters the upper pond via a riparian drainage channel immediately north of the pond that is fed by in-flow from an NID ditch (AR Associates 1995). Water from the lower pond is discharged through a culvert into a drainage channel south of Atwood Road and ultimately into North Ravine. Both ponds have bands of emergent vegetation around their peripheries, consisting primarily of broadleaf cattail and willows.

American coots, ruddy ducks, mallard ducks, great blue heron, and Pacific chorus frog were observed on both ponds during 2002 field visits. In addition, tree swallows, northern rough-winged swallows, black phoebe, and red-winged blackbirds were observed roosting or foraging around the upper pond's edge and over its surface. The ponds are also likely to support species such as violet green swallow, bullfrog, common and aquatic garter snake, raccoon, and Virginia opossum. The upper pond supports a warmwater fishery consisting of largemouth bass and various sunfishes. A pond turtle was observed in this pond during 2003 field visits.

Riparian Wetland

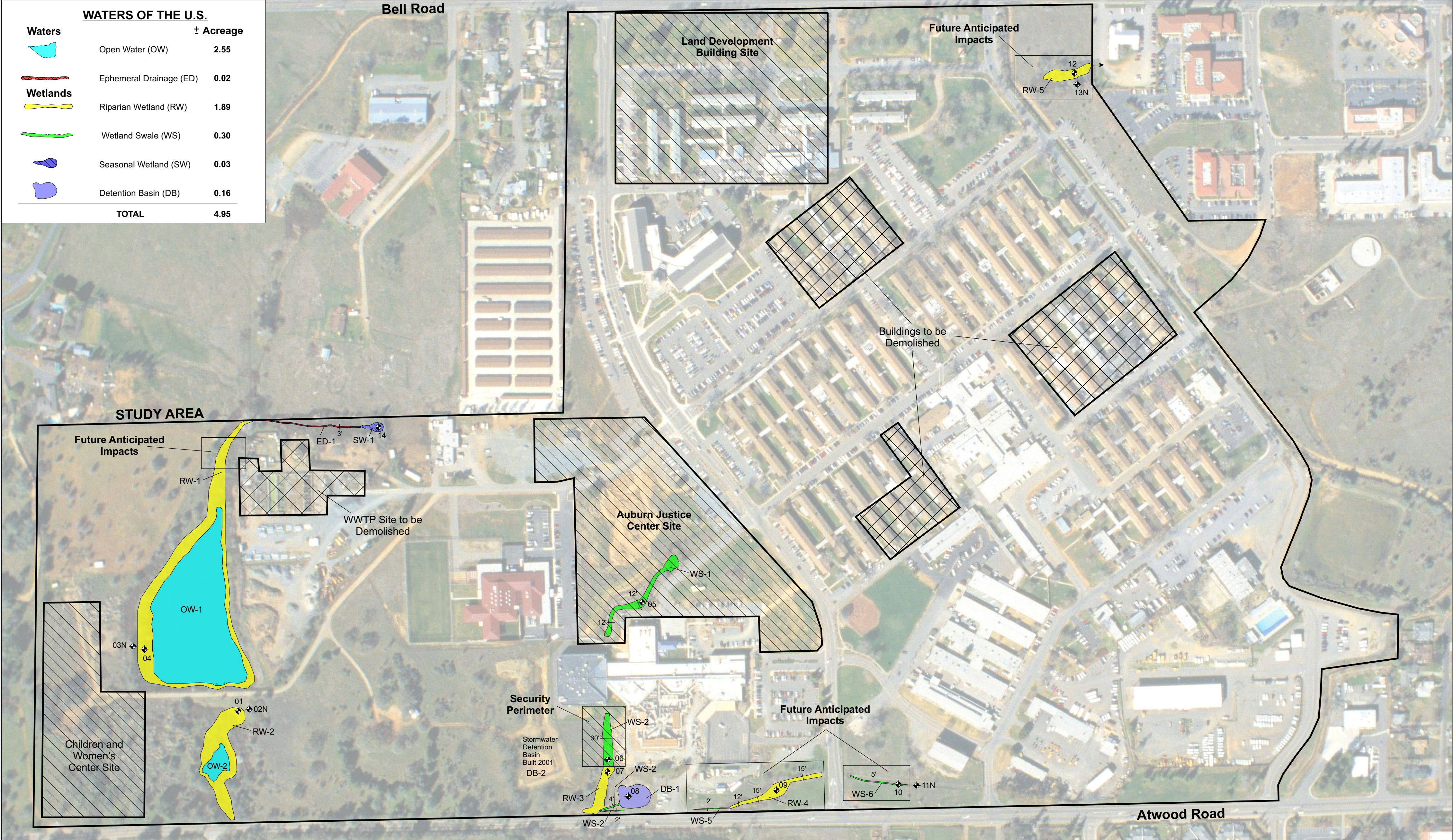
DeWitt Center supports approximately ± 1.89 acres of riparian wetlands. Riparian wetlands occur around the periphery of the two open water ponds, along the drainage that feeds into the northern pond, along the southern periphery of the property near the Main Jail, and at the northeast corner of DeWitt Center. These riparian wetlands are generally dominated by hydrophytic tree species including several species of willows, Fremont cottonwood, and white alder. The understory contains Himalayan blackberry, cattails, sedges, and rushes.

Wildlife that use the riparian wetland habitat includes many of the same species that are found in the adjacent riparian upland. In addition, many of the avian species – the insectivorous birds in particular – that forage in or over the open water ponds use the riparian wetlands for nesting, roosting, or simply for resting.

Seasonal Wetland

A small (0.16 acres) seasonal wetland occupies the floor of a man-made stormwater detention pond along Atwood Road south of the Main Jail. The wetland vegetation consists of cattails and common rush, with some small willows along the periphery. Because of its proximity to the road and its openness, it is of limited value to wildlife. Species observed during the 2002 field visits included red-winged blackbird and Brewer's blackbird.

Another small (0.03 acres) seasonal wetland exists north of the larger of the two open water ponds onsite. Water in this wetland drains through an ephemeral drainage to the riparian wetland complex that surrounds the upper open water pond.



Data Points

01 Three Parameter Data Point - Wetland

01N Three Parameter Data Point - Upland

— (Culvert

Project Notes

Gross Study Area: ±180 acres

Photo Date: February 28, 2002 by Geoimagery

Field Delineation conducted March and June 2002 by Jeff Glazner and Barry Anderson

Map Date: 8-31-02

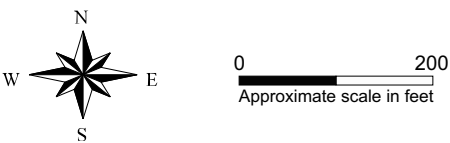


Figure 9-2

WETLAND DELINEATION MAP

*DeWitt Government Center
Facility Plan (2003 - 2010)
Placer County, California*

Wetland Swale

There are six wetland swales, totaling approximately 0.30 acres, on the DeWitt Center property. Wetland swales form where inundation or saturation occurs throughout the winter and at least portions of the spring. These areas may also have periodic flows from adjacent urban uses such as street runoff. Two swales occur directly north and directly south of the Main Jail. Both are vegetated primarily with broad-leaf cattails, while the northern swale also contains willows and Himalayan blackberry. This swale has been partially filled as a result of flood channel modifications. It drains via a culvert under the jail and empties into the southern swale, which is located within the security perimeter of the jail. This swale drains into the Atwood Road Detention Pond, which was created in 1996 and has naturalized into a riparian wetland under the jurisdiction of the Corps. Because of their disturbed condition and proximity to the jail and vehicular traffic, these swales support only a small amount of use by species such as red-winged blackbirds, white-crowned sparrows, and Pacific chorus frogs.

The other four wetland swales comprise a portion of the stormwater drainage network along the northern side of Atwood Road, starting east of Richardson Drive and traveling as far west as the jail. These swales convey water from the adjacent developed areas to the east and north through a narrow grassy corridor along Atwood Road. The swales are broken up by culverts placed under Richardson Drive and under the access driveway to the jail. The westernmost swale empties into the Atwood Road Detention Pond south of the jail. The drainage is then conveyed through a culvert under Atwood Road to the wetland complex on the property south of DeWitt Center, and eventually enters North Ravine. Vegetation within these swales includes Italian ryegrass, Baltic rush, Mediterranean barley, curly dock, and willow-herb. Because of their proximity to the road and adjacent buildings, these swales are of limited value to wildlife.

Adjacent Habitats

The natural habitats in the southwestern portion of the area are part of a much larger complex of habitats that extend primarily to the south and west. A large area of oak woodland, with limited rural development interspersed, abuts the property immediately to the west. To the south is a continuation of the riparian corridor that extends from the open water ponds until it enters North Ravine, about three-quarters of a mile south of DeWitt Center. This corridor traverses a lightly developed rural residential area. Also to the immediate south of DeWitt Center, directly south of the jail and Atwood Road, is a man-made open-water pond and another riparian corridor, extending southwest through currently undeveloped grassland and eventually discharging into North Ravine. The drainage from the wetland swales at the southern boundary of DeWitt Center is conveyed to this riparian corridor through a culvert. Placer County is currently considering an application to develop the area around this open water pond with 147 single family homes on lots ranging between 4,872 and 37,834 square feet. That development is the subject of the County's Atwood Ranch Unit III Subdivision EIR.

The wildlife assemblages of the adjacent areas are similar to those found in the project area and most of the species are likely to use all three adjacent areas – the oak woodland, the riparian corridor, and the open water pond – as habitat. The riparian habitats, both onsite and offsite, serve as segments of travel corridors for many species. The continuity of the travel corridors is broken by the existing level of development and existing roadways in the area. For example, species at DeWitt Center are somewhat isolated from habitats to the south by the presence of Atwood Road, which carries moderate traffic volumes.

Special Status Species

Appendix D to this EIR includes a list of species recognized by one or more local, state, or federal agencies and/or by a public interest conservation organization as requiring regulatory or special concern. The list was compiled from a query of the California Department of Fish and Game Natural Diversity Database, the U.S. Fish and Wildlife Service, and the California Native Plant Society. The Auburn USGS 7 ½ minute topographic quadrangle, the quadrangle in which DeWitt Center is located, and the surrounding eight quadrangles were queried. To facilitate the discussion in this EIR, each species in Appendix D is placed in one of the following three significance categories.

Category 1 species have full statutory legal status. That is, they are protected by law and all impacts to these species are considered significant and require mitigation. This category includes:

- Species listed as threatened or endangered pursuant to the federal Endangered Species Act,
- Species considered candidate species by the U.S. Fish and Wildlife Service, and
- Species considered rare (plants only), threatened, or endangered pursuant to the California Endangered Species Act.

Category 2 species are not protected by law; rather, they are given protection by regulation, guideline, or other mechanism. Impacts to Category 2 species are significant and require mitigation. Category 2 includes:

- Species considered species of special concern by the California Department of Fish and Game,
- Species fully protected by the California Fish and Game Code,
- Species considered threatened or endangered by Section 15380 of the California Environmental Quality Act Guidelines, and
- Species on the California Native Plant Society List 1 and List 2.

Category 3 species generally have no legal or regulatory protection, and impacts to Category 3 species are not necessarily significant. Each Category 3 species will be assessed individually to determine whether impacts to it are significant. This category includes:

- Species considered species of concern by the U.S. Fish and Wildlife Service,
- Species considered to be of local concern by the U.S. Fish and Wildlife Service,
- Species protected by the national Migratory Bird Treaty Act, and
- Species on the California Native Plant Society List 3 and List 4.

Species in all three categories that arose from the nine-quadrangle search are briefly listed in Appendix D. Category 1 and Category 2 species in Appendix D that occur in the DeWitt Center Study Area or are considered unlikely, possible, or likely to occur in the study area are discussed further in this section, and included in the following Special Status Species chart, *Table 9.1*. Category 1 and Category 2 species that have no likelihood to occur in the study area

are not discussed further in this section, but are included in Appendix D. Category 3 species that occur in the study area or are considered unlikely, possible, or likely to occur are discussed in the text when impacts to them or their habitat are substantial and possibly significant.

The following discussion and Special Status Species chart uses the following categories when assessing the likelihood of species occurrence at DeWitt Center.

- **None** The species does not occur in the DeWitt Center Study Area and there is no suitable habitat present. This includes species that may fly over the study area but for which no nesting habitat exists.
- **Unlikely** There is a very low probability for the species to occur in the study area.
- **Possible** The species could occur in the study area because marginally suitable habitat for it is present.
- **Likely** Suitable habitat for the species exists, and there is a fair to moderate probability that it could occur in the study area.
- **Occurs** The species has been observed in the DeWitt Center Study Area.

Table 9.1

Potential for Occurrence of Special Status Plant and Animal Species at DeWitt Center

Common Name	Scientific Name	Status*	Habitat Description	Likelihood of Occurrence
Plants				
Big-scale balsamroot	<i>Balsamorhiza macrolepis macrolepis</i>	List 1B	Chaparral, cismontane woodland; valley and foothill grassland [often serpentinite]	Unlikely. Marginal habitat onsite but not known from area.
Brandegee's Clarkia	<i>Clarkia biloba brandegeae</i>	List 1B	Foothill woodland, yellow pine forest, chaparral and cismontane woodland. Often found in roadcuts and/or serpentine soil.	Possible. Marginal woodland habitat onsite.
Sanford's Arrowhead	<i>Sagittaria sanfordii</i>	FSC/List 1B	Marshes, swamps, and ditches: assorted shallow freshwater.	Unlikely. Could occur in the road-side ditches, however, usually found at lower elevations.
Invertebrates				
None				
Amphibians				
California red-legged frog	<i>Rana aurora draytonii</i>	FT/CSC	Occurs in lowlands and foothills in deeper pools and streams with emergent wetland vegetation. Requires 11-20 weeks of water for larval development.	Unlikely. Marginal habitat exists in the ponds onsite.
Foothill yellow legged frog	<i>Rana boylei</i>	FSC/CSC	Found in partially shaded, shallow streams with rocky substrates. Needs some cobble-sized rocks as a substrate for egg laying.	Unlikely. Suitable rocky stream habitat not present onsite.

Common Name	Scientific Name	Status*	Habitat Description	Likelihood of Occurrence
Western spadefoot toad	<i>Scaphiopus hammondi</i>	FSC/CSC	Found primarily in grassland habitats, but may occur in valley and foothill woodlands. Requires vernal pools, seasonal wetlands, or stock ponds for breeding and egg laying.	Unlikely. Marginal habitat is present; generally occurs at lower elevations
Reptiles				
Western pond turtle	<i>Clemmys marmorata</i>	CSC	Inhabits ponds, marshes, rivers, streams and irrigation ditches with aquatic vegetation. Needs suitable basking sites and upland habitat for egg laying.	Likely. Suitable habitat is present onsite.
California horned lizard	<i>Phrynosoma coronatum frontale</i>	FSC/CSC	Found in a variety of habitats, but most common in sandy washes with scattered shrubs. Requires open areas for sunning, shrubs for cover, and sandy soil for hiding. In Auburn region, primarily associated with rocky chaparral areas with loose soils.	Unlikely. Marginal habitat occurs on the site.
Birds				
White-tailed kite (nesting)	<i>Elanus leucurus</i>	FSC/CFP	Found in lower foothills and valley margins with scattered oaks and along river bottomlands or marshes adjacent to oak woodlands. Nests in trees with dense tops.	Possible. Forages on the site; suitable nesting habitat is present.
Cooper's hawk (nesting)	<i>Accipiter cooperii</i>	CSC	Open woodlands, primarily near riparian areas. Usually nests in deciduous trees with a dense canopy.	Possible. Could nest onsite.
Northern harrier (nesting)	<i>Circus cyaneus</i>	CSC	Frequents meadows, grasslands, open rangelands, freshwater emergent wetlands; seldom found in wooded areas. Nests on ground in shrubby vegetation near marsh edge.	Unlikely. Suitable nesting and foraging habitat not present.
Burrowing owl (burrow sites)	<i>Athene cunicularia</i>	FSC/CSC	Found in annual and perennial grasslands. Nests in burrows dug by small mammals, primarily ground squirrels.	Unlikely. Marginal habitat occurs in disturbed areas; not typically found at this elevation in region.
Long-eared owl (nesting)	<i>Asio otus</i>	CSC	Occurs in dense, mixed forests and tall shrublands, usually next to open spaces, such as grasslands and meadows. Nests in abandoned crow, magpie or hawk nest in trees and occasionally in a natural tree cavity in habitats which create a dense canopy.	Unlikely. Habitat onsite is lacking in dense tree canopy.
Loggerhead shrike (nesting)	<i>Lanius ludovicianus</i>	FSC/CSC	Found in broken woodlands, shrubland, and other habitats. Prefers open country with scattered perches for hunting and fairly dense brush for nesting.	Possible. Suitable habitat is present.

Common Name	Scientific Name	Status*	Habitat Description	Likelihood of Occurrence
Tricolored blackbird (nesting colony)	<i>Agelaius tricolor</i>	FSC/CSC	Colonial nester in dense cattails, tules, brambles or other dense vegetation. Requires open water, dense vegetation, and open grassy areas for foraging.	Unlikely. Cattail and blackberry around pond could provide suitable habitat, however generally not found at this elevation.
Yellow warbler (nesting)	<i>Dendroica petechia brewsteri</i>	CSC	Riparian deciduous habitats with low open-canopy: cottonwood, willows, alders, and other small trees/shrubs for nesting and foraging.	Unlikely. Suitable riparian habitat for nesting not present onsite.
Yellow breasted chat (nesting)	<i>Icteria virens</i>	CSC	Riparian thickets of willow and other brushy tangles near watercourses. Nests low in shrubs or small trees in dense riparian vegetation.	Unlikely. Suitable habitat for nesting not present onsite.
Mammals				
Pallid bat	<i>Antrozous pallidus</i>	CSC	Occurs in a wide variety of habitats: grassland, shrubland, woodland, and forest. Most common in open, dry habitats with rocky areas for roosting. Night roosts often include porches and open buildings.	Possible. Could roost in buildings and natural habitat areas onsite.
Yuma myotis bat	<i>Myotis yumanensis</i>	FSC/CSC	Inhabits forests and woodlands. Requires water over which it feeds. Roosts in caves, mines, buildings, or crevices.	Possible. Could roost in buildings and in oak woodland.
Townsend's big-eared bat	<i>Plecotus townsendii</i>	CSC/FSC	Found in all but subalpine and alpine habitats. Roosts in limestone caves, lava tubes, mines, and buildings.	Unlikely. Could roost in buildings, however, roosting sites are known to be very sensitive to any disturbance.

*The abbreviations for the "Status" column are defined as:

FEDERAL

FE = Federal Endangered

FT = Federal Threatened

FC = Federal Candidate

FSC = Federal Species of Concern

FSLC = Federal Species of Local Concern

STATE

CE = California Endangered

CT = California Threatened

CR = California Rare

CC = California Candidate

CSC = California Species of Special Concern

CFP = California Fully Protected

CNPS

List 1A = Extinct

List 1B = Rare, threatened, or endangered in CA or elsewhere

List 2 = Rare, threatened, or endangered in CA, more common elsewhere

List 3 = More information is needed; a review list

List 4 = Limited distribution; a watch list

Biological resources surveys were conducted across the project area in 2002 and 2003. These surveys included targeted animal and plant observations to identify the potential for any special status species to occur in the DeWitt Center Study Area. The results of these surveys, including lists of all species observed onsite, are documented in Appendix D of this EIR.

Plants

Big-scale balsamroot (*Balsamorhiza macrolepis* var. *macrolepis*) is considered rare or endangered in California by the California Native Plant Society (List 1B) but is not designated by either the state or federal governments as rare, threatened, or endangered. It occurs in chaparral, woodland, and valley and foothill grassland habitats, often on serpentine soils. It has been found in elevations up to approximately 4,500 feet. Although marginal habitat for big-scale balsamroot exists onsite, it has not been found in the area and is unlikely to occur onsite. The results of the DeWitt Center 2003 spring floristic surveys concluded that no members of the genus *Balsamorhiza* were observed onsite although related common species were found in the oak woodland.

Brandegee's clarkia (*Clarkia biloba brandegeae*) is on the California Native Plant Society 1B list, indicating the species is rare or endangered in California and elsewhere. However, it has not been designated by either the state or federal governments as rare, threatened or endangered. This species is known primarily from chaparral and woodland at elevations below approximately 2,900 feet, often found on roadcuts and/or serpentine soil. Brandegee's clarkia has a possibility of occurring in the woodland habitat onsite. The results of the DeWitt Center 2003 spring floristic surveys concluded that two common members of the genus *Clarkia* were observed onsite, but *Clarkia biloba brandegeae* was not observed.

Sanford's Arrowhead (*Sagittaria sanfordii*) is on the California Native Plant Society List 1B, however it is not listed as rare, threatened, or endangered by state or federal governments. It is considered a species of concern by the U.S. Fish and Wildlife Service. Sanford's Arrowhead occurs in marshes and swamps within the Central Valley. It is usually found in standing or slow-moving freshwater ponds, marshes, and ditches. Sanford's Arrowhead is unlikely to occur onsite because it generally occurs at lower elevations and there are no marsh or swamp habitats onsite. The results of the DeWitt Center 2003 spring floristic surveys concluded that no members of the genus *Sagittaria* were observed in the ponds onsite.

Appendix D identifies other plant species known to occur or with potential to occur within an approximately 500 square mile area surrounding DeWitt Center. These plant species either do not occur onsite or are classified with Category 3 significance with no significant impacts to them or their habitat.

Invertebrates

Appendix D identifies invertebrate species known to occur or with potential to occur within an approximately 500 square mile area surrounding DeWitt Center. These invertebrate species either do not occur onsite or are classified with Category 3 significance with no significant impacts to them or their habitat.

Amphibians

The **California red-legged frog** (*Rana aurora draytonii*) is listed as threatened by the U.S. Fish and Wildlife Service and as a species of special concern by the California Department of Fish and Game. This frog formerly occurred throughout the lower elevations of the Sierra and foothills, but has been virtually eliminated in those regions by habitat alteration and predation. Predation leading to the red-legged frog decline has been attributed to introduced bullfrogs, as

well as miners from the Gold Rush period in California. No evidence of red-legged frog presence was observed onsite during the 2002 or 2003 field surveys. However, suitable habitat could occur in the ponds at DeWitt Center amid the overhanging and emergent vegetative cover. In the spring of 2002 a red-legged frog survey was conducted for the property immediately south of DeWitt Center by Gibson and Skordal, and in the late summer of 2003 Gibson and Skordal conducted a red-legged frog survey for the DeWitt Center Study Area. Neither survey found any occurrence of red-legged frogs in the study area or on the adjacent site. A copy of the Gibson and Skordal report on the DeWitt Center Study Area survey can be reviewed at the offices of the Placer County Department of Facility Services upon completion of that report, as stated above.

The **foothill yellow-legged frog** (*Rana boylei*) is listed as a species of concern by both the U.S. Fish and Wildlife Service and the California Department of Fish and Game. The foothill yellow-legged frogs are found in or near partially shaded, shallow, and rocky streams in a variety of habitats in the Sierra foothills, coast ranges, and other mountain ranges of California. These frogs are typically associated with rockier substrates than are present at DeWitt Center. It is unlikely for them to occur in the project area. No evidence of their presence was observed during surveys conducted in the springs of 2002 and 2003.

The **western spadefoot toad** (*Scaphiopus hammondi*) is considered a species of special concern by the California Department of Fish and Game and a species of concern by the U.S. Fish and Wildlife Service. It inhabits primarily grassland areas but may also be found in foothill hardwood and woodlands. Optimal habitat is grassland interspersed with shallow temporary pools, which are used during the breeding season. Newly metamorphosed juveniles seldom move far from the breeding ponds. Adults of the species spend most of the day during warm weather (spring through fall) in burrows in adjacent grasslands, coming to the surface to feed on insects in the evening. In colder weather they become inactive. The species may possibly occur in the general vicinity of the study area but there is no suitable habitat for them on the property. It is unlikely for the western spadefoot toad to occur on the property as it generally occurs at lower elevations and in grassland areas. No evidence of their presence was observed during surveys conducted in the springs of 2002 and 2003.

Appendix D identifies other amphibian species known to occur or with potential to occur within an approximately 500 square mile area surrounding DeWitt Center. These species either do not occur onsite or are classified with Category 3 significance with no significant impacts to them or their habitat.

Reptiles

Western pond turtles (*Clemmys marmorata*) are considered a species of special concern by the California Department of Fish and Game. These turtles occur throughout California, west of the Cascade-Sierra crest. Western pond turtles are associated with ponds and waterways in grassland, oak woodland, and coniferous forests. This aquatic reptile inhabits quiet waters of ponds, marshes, creeks, and irrigation ditches. A subspecies of the western pond turtle, the **northwestern pond turtle** (*Clemmys marmorata marmorata*), is also listed as a species of special concern by the California Department of Fish and Game. This subspecies has similar habitat requirements. The ponds and riparian wetlands on the property represent potential habitat for

western pond turtles. A western pond turtle was observed in the upper open water pond onsite. It is assumed that the lower pond also provides habitat for this species.

The **California horned lizard** (*Phrynosoma coronatum frontate*) is identified as a species of special concern by the California Department of Fish and Game and a species of concern by the U.S. Fish and Wildlife Service. It is found from Tehama County south to Tulare County and its habitats include foothill hardwoods, annual grasslands, and riparian habitats, especially in loose or sandy soils. This species occurs in rocky, sandy substrate areas. In the Auburn region, this species is primarily associated with rocky chaparral areas with loose soils. It is unlikely that the California horned lizard occurs onsite due the lack of suitable habitat. No evidence of their presence was observed during surveys conducted in the springs of 2002 and 2003.

Birds

For many birds, the California Department of Fish and Game's Natural Diversity Database tracks only nesting locations. All of the bird species in the Special Status Species chart above are tracked through nesting location (as indicated in parentheses after the common name). Therefore, this EIR primarily uses nesting habitat considerations to determine bird species potential to occur onsite and significance of impacts .

The **white-tailed kite** (*Elanus caeruleus*) is considered "fully protected" by the California Department of Fish and Game and the U.S. Fish and Wildlife Service considers it a species of concern. This species nests in trees with dense canopies within riparian habitats and oak woodlands in the Central Valley and foothills. White-tailed kites forage within open grassland and savanna areas. Suitable foraging habitat occurs in the western portion of DeWitt Center, where they have been observed roosting and foraging. A white-tailed kite was observed during the spring 2002 and 2003 surveys. The bird was seen foraging in the southwest corner of the property between the oak woodland habitat and the lower open water pond. Suitable nesting habitat is also available onsite but no evidence of this species nesting onsite was observed during site surveys.

Cooper's hawk (*Accipiter cooperii*) is listed by the California Department of Fish and Game as a species of special concern. These hawks are breeding residents throughout most of the wooded portions of California. This species typically nests in a tree with a dense canopy - from foothill pine-oak woodlands to ponderosa pine forest. They breed from early April to late August, with a peak from early June to early August. Nesting usually occurs in a deciduous tree, generally near open water or riparian vegetation. Suitable nesting habitat does exist in the project area, making it is possible that the Cooper's hawk could nest onsite. During winter, Cooper's hawks are found in a variety of wooded habitats. Cooper's hawks could possibly forage in the project area. No evidence of their presence was observed during surveys conducted in the springs of 2002 and 2003.

Northern harrier (*Circus cyaneus*) is a species of special concern to the California Department of Fish and Game. Harriers forage almost exclusively in marshlands, meadows, grasslands, and similar areas. They nest on the ground in hummocks of tall grasses or in shrubbery. There is marginal nesting habitat in the project area around the open water ponds and only limited area available for foraging for this species. In addition, the northern harrier usually occurs at lower

elevations. Therefore, it is unlikely that the northern harrier would nest onsite. No evidence of their presence was observed during surveys conducted in the springs of 2002 and 2003.

The **burrowing owl** (*Athene cunicularia*) is considered a species of concern by the U.S. Fish and Wildlife Service and a species of special concern by the California Department of Fish and Game. Burrowing owls typically utilize abandoned ground squirrel (or other mammal) burrows within open grasslands in the Central Valley and foothills surrounding the San Joaquin County area. Burrowing owls are not typically found in the foothills of the western Sierra Nevada range. In the vicinity of Placer County, burrowing owls are more often found at elevations lower than the project site. They feed upon insects, small mammals, birds, reptiles, and carrion. Breeding occurs from March through August, with peak breeding season occurring in April and May. Burrows suitable for nesting and cover were not observed during biological studies onsite in 2002, nor during the 2003 spring surveys. For these reasons, and because of the amount of disturbance the project area receives, the species is unlikely to occur in the DeWitt Center Study Area.

Long-eared owl (*Asio otus*) is a species of special concern to the California Department of Fish and Game. Long-eared owls occur in dense, mixed forests and tall shrublands, usually next to open spaces, such as grasslands and meadows. They often nest in abandoned crow, magpie, or hawk nests, and occasionally in a natural tree cavity. The long-eared owl is typically a yearlong resident in elevations represented in the project area. Since DeWitt Center lacks habitat with dense tree canopy (an association of trees which together provide a dense canopy), the long-eared owl is unlikely to occur onsite. No evidence of their presence was observed during surveys conducted in the springs of 2002 and 2003.

Loggerhead shrike (*Lanius ludovicianus*) is listed as a species of special concern by the California Department of Fish and Game, and considered a species of concern by the U.S. Fish and Wildlife Service. This species can be found in lowlands and foothills throughout California. The loggerhead shrike prefers open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches. Loggerhead shrike nests are usually in densely foliated shrubs or trees, and are generally well concealed. Suitable habitat is present onsite within the oak woodland habitat, and the species could possibly be present onsite. No evidence of their presence was observed during surveys conducted in the springs of 2002 and 2003.

Tricolored blackbird (*Agelaius tricolor*) is listed as a species of special concern by the California Department of Fish and Game, and is considered a species of concern by the U.S. Fish and Wildlife Service. These birds are largely endemic to California and breed mostly in the Central Valley. Western Placer County is at the edge of this species' breeding range. Their preferred habitat is among blackberry, cattails, and tules in freshwater emergent marshes and around shallow lakes. Tricolor blackbirds are generally found at lower elevations than the project area. There is potential suitable habitat among the cattail and blackberry surrounding the open water ponds in the western portion of DeWitt Center. However, due to the fact that the species typically occurs at lower elevations, it is unlikely to occur onsite. Surveys in spring of 2002 and 2003 did not reveal the presence of tricolored blackbirds onsite.

Yellow warbler (*Dendroica petechia brewsteri*) is a species of special concern to the California Department of Fish and Game. The species breeds in riparian deciduous habitats with low, open canopies, and dry montane chaparral. It nests in the fork of a deciduous tree or a small

shrub branch. The yellow warbler is a summer resident to the northern Sierra foothills. Suitable nesting habitat for this species does not occur in the project area and it is unlikely for it to occur onsite. No evidence of their presence was observed during surveys conducted in the springs of 2002 and 2003.

Yellow breasted chat (*Icteria virens*) is a species of special concern to the California Department of Fish and Game. The yellow breasted chat inhabits riparian thickets of willow and other brushy tangles near watercourses. The species nests low in a shrub or small tree in dense riparian vegetation, and is a summer resident to the Sierra foothills. Suitable nesting habitat for this species does not occur in the project area and it is unlikely for it to occur onsite. No evidence of their presence was observed during surveys conducted in the springs of 2002 and 2003.

Appendix D identifies other bird species known to occur or with potential to occur within an approximately 500 square mile area surrounding DeWitt Center. These bird species either do not occur onsite or are classified with Category 3 significance with no significant impacts to them or their habitat.

Mammals

The **Pallid bat** (*Antrozous pallidus*) is considered a species of special concern by the California Department of Fish and Game. It occurs in the lower foothills up through the mixed conifer forests at about 6,000 feet in elevation. It prefers open, dry habitats with rocky areas or cavities in trees for roosting, however it has been found in a wide variety of habitats including grassland, shrubland, woodland, and forests. Pallid bats' day roosts are in caves, crevices, mines, and occasionally hollow trees and buildings. Night roosts may be in more open sites, such as porches and open buildings. It is very sensitive to heat and to disturbance of roosting sites. There is potential roosting habitat for the Pallid bat in the buildings and the more natural areas at DeWitt Center. It is possible that the Pallid bat occurs onsite. It is known that some bats roost in existing buildings onsite. Surveys to determine exact species of the onsite bats have not been conducted.

The **Yuma myotis bat** (*Myotis yumanensis*) is considered a species of special concern by the California Department of Fish and Game and a U.S. Fish and Wildlife Service species of concern. Optimal habitat is open forest and woodland with sources of water over which to feed. It roosts in caves, mines, tunnels, buildings, and under bridges. Suitable roosting habitat could be provided by the buildings and oak woodland onsite. It is possible that this bat roosts within DeWitt Center and/or forages over the site. It is known that some bats roost in existing buildings onsite. Surveys to determine exact species of the onsite bats have not been conducted.

Townsend's big-eared bat (*Plecotus townsendii*) is a species of special concern by the California Department of Fish and Game and a U.S. Fish and Wildlife Service species of concern. It is found in all but subalpine and alpine habitats. The species roosts in limestone caves, lava tubes, mines, and buildings, and is most abundant in moist habitats. Townsend's big-eared bat is extremely sensitive to disturbance of the roosting sites. Although suitable roosting habitat could be provided in the existing buildings, it is unlikely that the species occurs onsite due to its sensitivity to disturbance. It is known that some bats roost in existing buildings onsite. Surveys to determine exact species of the onsite bats have not been conducted.

Project Components

Although the onsite natural habitats have been disturbed to some degree, important habitat areas remain within the various project component sites. The Auburn Justice Center (AJC) site supports wetland swales and associated ruderal vegetation. The Children's Emergency Shelter and Women's Center (CES and WC) are proposed to be developed within the oak woodland natural habitat in the southwest corner of the area. The Land Development Building (LDB) and the various building demolitions are located in highly disturbed urban landscapes.

Land Development Building

The LDB site is currently highly developed, limiting the vegetation to lawns and scattered trees and shrubs. Many of the trees are significant in size; the large oak tree near the center of the site is particularly noteworthy. Approximately 120 trees exist at the LDB site, the majority of which are ornamental, non-native species. Of these, 38 are proposed for preservation. Native trees at this site consist of three blue oaks (*Quercus douglassii*). The diameter at breast height (dbh) of each oak tree is 47.5 inches, 72.5 inches, and 34 inches. Wildlife at this site is primarily limited to passerine songbirds, squirrels, and feral cats. Additionally, it is known that some bats roost in existing buildings at DeWitt Center, possibly including the buildings proposed for demolition at the LDB site. Surveys to determine exact species of the onsite bats have not been conducted, therefore it is possible that some special status bat species exist at the LDB site.

Auburn Justice Center

While the AJC site is primarily vacant, it is characterized by a high level of disturbance as a result of the previous grading operations onsite and in the vicinity. Scattered trees, including one 37 inch dbh live oak (*Quercus wislizeni*) and one 7 inch dbh blue oak, a few willows, and a few ornamental trees exist on portions of this site. A small wetland swale exists in the southwest portion of the site, which flows to a culvert passing under the Main Jail facility. An area of ruderal vegetation exists adjacent to the southwestern side of this swale. Ruderal habitats within DeWitt Center consist of lands subject to ongoing disturbance and previously disturbed lands in the process of reverting to a vegetated or natural habitat condition. The AJC site slopes down from the northeast and will require some grading to provide a level building site. The AJC site is not likely to support any special status plant or animal species.

Children's Emergency Shelter and Women's Center

The CES and WC facilities are proposed for construction within the undeveloped southwestern portion of DeWitt Center, west of the open water ponds. These sites currently support oak woodland habitat. The Tree Assessment for DeWitt Center (NFA 2003) found that 87 oak trees exist within these project sites. The majority of the trees were assessed as having fair health, vigor, and structure. These sites are also characterized by gently rolling topography, and the presence of several old debris piles which have been overgrown with vegetation.

Given the proximity of the CES and WC project sites to the onsite open water ponds and associated wetlands, it is possible that this area serves as a wildlife travel corridor, and the sites have potential to support some special status species. In addition, trees in the project area could support nesting raptors.

Facility/Building Demolition

The structures proposed for demolition largely consist of structures within the highly developed portions of DeWitt Center's urban landscape. Wildlife at the building and facility demolition sites is limited to passerine songbirds, squirrels and other rodents, and bats. It is known that some bats roost in existing buildings onsite. Surveys to determine exact species of the onsite bats have not been conducted, therefore it is possible that some special status bat species exist at the demolition sites. Due to a lack of substantial research on the special status bat species with potential to occur onsite, the California Department of Fish and Game and the U.S. Fish and Wildlife Service have not established protocols for surveys or measures for assessing and mitigating impacts to these species.

9.2 REGULATORY FRAMEWORK

Federal Regulation

Federal Endangered Species Act

The Federal Endangered Species Act prohibits the "take" of species (including animals and plants) listed by the U.S. Fish and Wildlife Service as endangered or threatened. The Federal Endangered Species Act does not protect species that have been proposed for listing but have not yet been listed. "Take" is defined to include harassing, harming (including significantly modifying or degrading habitat), pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species, or any attempt to engage in such conduct. Actions that cause the take of endangered or threatened species can result in civil or criminal penalties.

The Federal Endangered Species Act guidelines prohibit any federal action, including funding or the issuance of permits for projects that would jeopardize the existence of a threatened or endangered wildlife or plant species. The U.S. Army Corps of Engineers must consult with the U.S. Fish and Wildlife Service to determine if the issuance of a permit for fill in wetlands would jeopardize any threatened or endangered species that may be affected by a proposed project. In the context of a development project, the Federal Endangered Species Act would be triggered if the project would result in the take of a threatened or endangered species or if issuance of a Section 404 permit or other federal agency action could jeopardize a listed species or adversely affect designated critical habitat.

Section 404 of the Clean Water Act

The U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency regulate the discharge of dredge and fill material into waters of the United States under Section 404 of the Clean Water Act. The Corps will typically exert jurisdiction over that portion of the project area that contains waters of the United States and adjacent or isolated wetlands. This jurisdiction includes approximately the bank-to-bank portion of a creek along its entire length up to the ordinary high-water mark, and adjacent wetland areas that will either be directly or indirectly adversely affected by a proposed project.

State Regulation

California Endangered Species Act

The California Endangered Species Act restricts the "take" of plant and wildlife species listed by the state as endangered or threatened, as well as candidates for listing. Section 86 of the

California Fish and Game Code defines “take” as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” As an implementation measure, the California Endangered Species Act directs agencies to consult with the California Department of Fish and Game regarding projects or actions that could affect listed species. Through this consultation, the California Department of Fish and Game must determine if jeopardy to listed species would occur, and identify “reasonable and prudent alternatives” to the project consistent with conserving the species. Agencies can approve a project that affects a listed species if the agency determines that there are “overriding considerations;” however, the agencies are prohibited from approving projects that would cause the extinction of a listed species.

Mitigating impacts on state listed species involves avoidance, minimization, and compensation (listed in order of preference). Unavoidable impacts on state listed species are typically addressed in a detailed mitigation plan prepared in accordance with California Department of Fish and Game guidelines. The California Department of Fish and Game exercises authority over mitigation projects involving state listed species, including those resulting from CEQA mitigation requirements.

Fish and Game Code Section 1600: Streambed Alteration Agreements

Under Chapter 6 of the California Fish and Game Code, the California Department of Fish and Game is responsible for the protection and conservation of the state’s fish and wildlife resources. Section 1600 *et. seq.* of the code defines the responsibilities of the California Department of Fish and Game and the requirements for public and private applicants to obtain an agreement to “divert, obstruct, or change the natural flow or bed, channel, or bank of any existing fish or wildlife resource or from which those resources derive benefit, or will use material from the streambeds designated by the department.” Public agencies file 1601 applications and private parties file 1603 applications for streambed alteration agreements. The local California Department of Fish and Game warden or unit biologist typically has responsibility for issuing streambed alteration agreements. These agreements usually include specific requirements related to construction techniques and remedial and compensatory measures to mitigate for adverse impacts. The California Department of Fish and Game may also require long-term monitoring as part of an agreement to assess the effectiveness of the proposed mitigation. Additionally, the California Department of Fish and Game has adopted a no-net-loss policy for wetlands.

Local Regulation

Placer County General Plan and Auburn/Bowman Community Plan

The DeWitt Center property and the proposed DeWitt Government Center Facility Plan fall under the jurisdiction of the *Placer County General Plan* and the *Auburn/Bowman Community Plan*. These plans highlight regulatory goals and policies for design, development, and planning within Placer County and the Auburn/Bowman unincorporated community. Policies and goals which are applicable to the proposed project are listed at the end of this *Regulatory Framework* section.

Placer County Tree Preservation Ordinance

Placer County has enacted a tree preservation ordinance that requires County approval prior to the removal of landmark or preserved trees, groves of native trees, native tree corridors, and

significant stands of native tree habitats. Placer County's tree ordinance (Chapter 12.16 of the Placer County Code) also prohibits the removal of trees from riparian areas without analysis of environmental impacts and the implementation of mitigation measures. For each tree identified for removal, and/or tree with disturbance to its dripline, replacement shall be as follows: one 15-gallon native oak tree for each tree removed or disturbance to its dripline; or three 5-gallon native oak trees for each tree removed or disturbance to its dripline; or five 1-gallon native oak trees for each tree removed or disturbance to its dripline; or fifteen seedlings and/or seeds for each tree removed or disturbance to its dripline.

Project Consistency with Local Regulations

As stated above, the primary local regulations applicable to the proposed project are the *Auburn/Bowman Community Plan* and the *Placer County General Plan*. The applicable goals and policies of those plans are listed below; while any inconsistencies of the proposed project with these goals and policies are discussed in **CHAPTER 4, LAND USE AND HOUSING** of this EIR.

Auburn/Bowman Community Plan

The Environmental Resources Management Element, Section IV, of the *Auburn/Bowman Community Plan* contains policies relating to biological resources within Placer County. Those policies applicable to the DeWitt Government Center Facility Plan project are listed below:

Goals IV.B.4.a

1. Preserve outstanding areas of native vegetation and trees, natural topographic features, wildlife habitats and corridors, and riparian corridors.
2. Conserve significant grassland and wooded areas as essential economic, natural, and aesthetic resources.
3. Protect, restore, and enhance threatened and endangered species and the habitat which supports those species.

IV.B.4.b.1 Conserve vegetative resources due to their importance for wildlife habitat, watershed protection, climate moderation, erosion control, and for their many other values.

IV.B.4.b.2 Conserve the natural landscape, including minimizing disturbance to natural terrain and vegetation, as an important consideration in the design of any subdivision or land development project.

IV.B.4.b.3 Require field studies as part of "major" project review or where the habitat of special status species is known to exist in order to document the possible occurrence of special status plant species and provide a method of protecting, monitoring, replacing or otherwise mitigating the impacts of development in and around these sensitive habitats.

IV.B.4.b.4 Support the "no net loss" policy for wetland areas administered by the U. S. Army Corps of Engineers, the U.S. Fish and Wildlife Service and the California Department of Fish and Game. Coordination with these agencies at all levels of project review shall continue to ensure that their concerns are adequately

addressed. Review the success of this policy every five years and make changes as appropriate.

- IV.B.4.b.5 Identify, protect, and enhance riparian corridors and vegetation; encourage preservation and maintenance of these area in as natural a state as possible.
- IV.B.4.b.7 Provide mitigation where impacts to stream environment zones or wetland areas are unavoidable. Measures shall include but not be limited to the identification of vegetation impacted; the preparation of revegetation plans; and the specific monitoring of plantings to assure that successful mitigation/revegetation has occurred.
- IV.B.4.b.8 Encourage landowners and developers to preserve the integrity of existing terrain and native vegetation in visually sensitive areas such as hillsides, ridges and along important transportation corridors and designated scenic highways.
- IV.B.4.b.9 Use native and compatible non-native species, especially drought resistant species, to the extent possible in fulfilling landscaping requirements imposed as conditions of discretionary permits.
- IV.B.4.b.10 Conserve representative areas of undisturbed oak woodlands and valley grasslands that have significant value as wildlife habitat.
- IV.B.4.b.11 Preserve and protect landmark trees and major groves of native trees.

Goals IV.B.5.a

- 1. Conserve the quality of habitats which support fish and wildlife species so as to maintain populations at sustainable levels.
- 2. Protect, restore and enhance habitats for native animals and protect threatened and endangered, and special status species.
- IV.B.5.b.2 Identify and protect important spawning grounds, migratory routes, waterfowl resting areas, oak woodlands, wildlife corridors, and other unique wildlife habitats critical to protecting and sustaining wildlife populations.
- IV.B.5.b.4 Recognize that stream channels, riparian corridors, natural drainages and the high quality of waters therein, are important as regional wildlife and fishery corridors.
- IV.B.5.b.9 Give special consideration to the habitats of rare, threatened, endangered, and/or other special status species in the Plan area. Federal and State agencies, as well as other resource conservation organizations, shall be encouraged to acquire and manage endangered species' habitats.
- IV.B.5.b.10 Require field studies as part of "major" project review or where the habitat of special status species has been identified. These studies shall document the possible occurrence of special status wildlife species and, provide a method for their protection, monitoring, replacement, or for otherwise mitigating development near their sensitive habitat.

Goals IV.C.1

1. Protect and preserve open spaces vital for wildlife habitat and/or which contain major or unique ecological significance.
 2. Protect the natural beauty and minimize disturbance of natural terrain and vegetation.
 3. Provide open space to shape and guide development and to enhance community identity.
 4. Conserve visual resources of the community, including important vistas and wooded areas.
- IV.C.2.c. Preserve and enhance natural landforms, native vegetation, and natural resources as open space to the maximum extent feasible.
- IV.C.2.d. Protect areas where greenbelts or linear open spaces should be preserved to enhance developed areas as well as to maintain the rural character of the area and clear boundaries of the “Auburn/Bowman” community.
- IV.C.2.f. In the design and construction of new development, preserve the following types of areas and features as open space to the maximum extent feasible: high erosion hazard areas; areas subject to landslide or with severe slope stability problems; areas with high fire risk; scenic and trail corridors; streams and other areas subject to flooding from a 100-year storm; streamside vegetation; wetlands; significant stands of vegetation; wildlife corridors; and any areas of special ecological significance.
- IV.C.2.g. Encourage development of all building sites and residences in a manner minimizing disturbance to natural terrain and vegetation and maximizing preservation of natural beauty and open space. Where urban uses are called for in the Plan, attempt to balance the needs of such projects with this policy.
- IV.C.2.r. Develop the recreational and open space potential of all water features, including reservoirs, natural streams and other waterways.

Placer County General Plan

The Natural Resources Element of the *Placer County General Plan* contains policies relating to biological resources within Placer County. The policies relating to biological resources that are applicable to DeWitt Government Center Facility Plan project are listed below:

- Goal 6.A** To protect and enhance the natural qualities of Placer County’s streams, creeks and groundwater.
- 6.A.1 The County shall require the provision of sensitive habitat buffers which shall, at a minimum, be measured as follows: 100 feet from the centerline of perennial streams, 50 feet from centerline of intermittent streams, and 50 feet from the edge of sensitive habitats to be protected including riparian zones, wetlands, old growth woodlands, and the habitat of rare, threatened or endangered species (see discussion of sensitive habitat buffers in Part I of this *Policy Document*). Based on more detailed information supplied as a part of the

review for a specific project, the County may determine that such setbacks are not applicable in a particular instance or should be modified based on the new information provided. The County may, however, allow exceptions, such as in the following cases:

- a. Reasonable use of the property would otherwise be denied;
- b. The location is necessary to avoid or mitigate hazards to the public;
- c. The location is necessary for the repair of roads, bridges, trails, or similar infrastructure; or
- d. The location is necessary for the construction of new roads, bridges, trails, or similar infrastructure where the County determines there is no feasible alternative and the project has minimized environmental impacts through project design and infrastructure placement.

6.A.3 The County shall require development projects proposing to encroach into a creek corridor or creek setback to do one or more of the following, in descending order of desirability:

- a. Avoid the disturbance of riparian vegetation;
- b. Replace riparian vegetation (on-site, in-kind);
- c. Restore another section of creek (in-kind); and/or pay a mitigation fee for restoration elsewhere (e.g., wetland mitigation banking program).

6.A.5 The County shall continue to require the use of feasible and practical best management practices (BMPs) to protect streams from the adverse effects of construction activities and urban runoff and to encourage the use of BMPs for agricultural activities.

6.A.6 The County shall require that natural watercourses are integrated into new development in such a way that they are accessible to the public and provide a positive visual element.

6.A.7 The County shall discourage grading activities during the rainy season, unless adequately mitigated, to avoid sedimentation of creeks and damage to riparian habitat.

Goal 6.B To protect wetland communities and related riparian areas throughout Placer County as valuable resources.

6.B.1 The County shall support the “no net loss” policy for wetland areas regulated by the U. S. Army Corps of Engineers, the U.S. Fish and Wildlife Service, and the California Department of Fish and Game. Coordination with these agencies at all levels of project review shall continue to ensure that appropriate mitigation measures and the concerns of these agencies are adequately addressed.

6.B.2 The County shall require new development to mitigate wetland loss in both regulated and non-regulated wetlands to achieve "no net loss" through any combination of the following, in descending order of desirability: (1) avoidance; (2) where avoidance is not possible, minimization of impacts on the

resource; or (3) compensation, including use of a mitigation banking program that provides the opportunity to mitigate impacts to rare, threatened, and endangered species and/or the habitat which supports these species in wetland and riparian areas.

6.B.3 The County shall discourage direct runoff of pollutants and siltation into wetland areas from outfalls serving nearby urban development. Development shall be designed in such a manner that pollutants and siltation will not significantly adversely affect the value or function of wetlands.

6.B.4 The County shall strive to identify and conserve remaining upland habitat areas adjacent to wetlands and riparian areas that are critical to the survival and nesting of wetland and riparian species.

6.B.5 The County shall require development that may affect a wetland to employ avoidance, minimization, and/or compensatory mitigation techniques. In evaluating the level of compensation to be required with respect to any given project, (a) on-site mitigation shall be preferred to off-site, and in-kind mitigation shall be preferred to out-of-kind; (b) functional replacement ratios may vary to the extent necessary to incorporate a margin of safety reflecting the expected degree of success associated with the mitigation plan; and (c) acreage replacement ratios may vary depending on the relative functions and values of those wetlands being lost and those being supplied, including compensation for temporal losses. The County shall continue to implement and refine criteria for determining when an alteration to a wetland is considered a less-than-significant impact under CEQA.

Goal 6.C To protect, restore, and enhance habitats that support fish and wildlife species so as to maintain populations at viable levels.

6.C.1 The County shall identify and protect significant ecological resource areas and other unique wildlife habitats critical to protecting and sustaining wildlife populations. Significant ecological resource areas include the following:

- a. Wetland areas including vernal pools,
- b. Stream environment zones,
- c. Any habitat for rare, threatened or endangered animals or plants,
- d. Critical deer winter ranges (winter and summer), migratory routes and fawning habitat,
- e. Large areas of non-fragmented natural habitat, including Blue Oak Woodlands, Valley Foothill Riparian, vernal pool habitat,
- f. Identifiable wildlife movement zones, including but not limited to, non-fragmented stream environment zones, avian and mammalian migratory routes, and known concentration areas of waterfowl within the Pacific Flyway,
- g. Important spawning areas for anadromous fish.

- 6.C.3 The County shall encourage the control of residual pesticides to prevent potential damage to water quality, vegetation, and wildlife.
- 6.C.6 The County shall support preservation of the habitats of rare, threatened, endangered, and/or other special status species. Federal and state agencies, as well as other resource conservation organizations, shall be encouraged to acquire and manage endangered species' habitats.
- 6.C.7 The County shall support the maintenance of suitable habitats for all indigenous species of wildlife, without preference to game or non-game species, through maintenance of habitat diversity.
- 6.C.9 The County shall require new private or public developments to preserve and enhance existing native riparian habitat unless public safety concerns require removal of habitat for flood control or other public purposes. In cases where new private or public development results in modification or destruction of riparian habitat for purposes of flood control, the developers shall be responsible for acquiring, restoring, and enhancing at least an equivalent amount of like habitat within or near the project area.
- 6.C.11 Prior to approval of discretionary development permits involving parcels within a significant ecological resources area, the County shall require, as part of the environmental review process, a biotic resources evaluation of the sties by a wildlife biologist, the evaluation shall be based upon field reconnaissance performed at the appropriate time of year to determine the presence or absence of rare, threatened, or endangered species of plants or animals. Such evaluation will consider the potential for significant impact on these resources, and will identify feasible measures to mitigate such impacts or indicate why mitigation is not feasible. In approving any such discretionary development permit, the decision-making body shall determine the feasibility of the identified mitigation measures.
- Significant ecological resource areas shall, at a minimum, include the following:
- a. Wetland areas including vernal pools,
 - b. Stream environment zones,
 - c. Any habitat for rare, threatened or endangered animals or plant,
 - d. Critical deer winter ranges (winter and summer), migratory routes and fawning habitat,
 - e. Large areas of non-fragmented natural habitat, including Blue Oak Woodlands, Valley Foothill Riparian, vernal pool habitat,
 - f. Identifiable wildlife movement zones, including buy not limited to, non-fragmented stream environment zones, avian and mammalian migratory routes, and known concentration areas of waterfowl within the Pacific Flyway,
 - g. Important spawning areas for anadramous fish.

- Goal 6.D** To preserve and protect the valuable vegetation resources of Placer County.
- 6.D.1 The County shall encourage landowners and developers to preserve the integrity of existing terrain and natural vegetation in visually-sensitive areas such as hillsides, ridges, and along important transportation corridors.
- 6.D.2 The County shall require developers to use native and compatible non-native species, especially drought-resistant species, to the extent possible in fulfilling landscaping requirements imposed as conditions of discretionary permits or for project mitigation.
- 6.D.4 The County shall ensure that landmark trees and major groves of native trees are preserved and protected. In order to maintain these areas in perpetuity, protected areas shall also include younger vegetation with suitable space for growth and reproduction.
- 6.D.7 The County shall support the management of wetland and riparian plant communities for passive recreation, groundwater recharge, nutrient catchments, and wildlife habitats. Such communities shall be restored or expanded, where possible.
- 6.D.8 The County shall require that new development preserve natural woodlands to the maximum extent possible.
- 6.D.10 The County shall encourage the planting of native trees, shrubs, and grasslands in order to preserve the visual integrity of the landscape, provide habitat conditions suitable for native wildlife, and ensure that a maximum number and variety of well-adapted plants are maintained.
- 6.D.12 The County shall support the retention of heavily vegetated corridors along circulation corridors to preserve their rural character.
- 6.D.13 The County shall support the preservation of native trees and the use of native, drought-tolerant plant material in all revegetation/landscaping projects.
- 6.D.14 The County shall require that new development avoid, as much as possible, ecologically fragile areas (e. g., areas of rare or endangered species of plants, riparian areas). Where feasible, these areas should be protected through public acquisition of fee title or conservation easements to ensure protection.
- Goal 6.E** To preserve and enhance open space lands to maintain the natural resources of the county.
- 6.E.1 The County shall support the preservation and enhancement of natural land forms, natural vegetation, and natural resources as open space to the maximum extent feasible. The County shall permanently protect, as open space, areas of natural resource value, including wetlands preserves, riparian corridors, woodlands, and floodplains.
- 6.E.2 The County shall require that new development be designed and constructed to preserve the following types of areas and features as open space to the maximum extent feasible:
- a. High erosion hazard areas;

- b. Scenic and trail corridors;
- c. Streams, streamside vegetation;
- d. Wetlands;
- e. Other significant stands of vegetation;
- f. Wildlife corridors; and
- g. Any areas of special ecological significance.

6.E.3 The County shall support the maintenance of open space and natural areas that are interconnected and of sufficient size to protect biodiversity, accommodate wildlife movement, and sustain ecosystems.

9.3 IMPACTS

Significance Criteria

A biological resource impact would be significant if any of the following conditions, as described in Appendix G of the CEQA Guidelines, would result with implementation of the proposed project:

- Disturbance of a significant natural vegetation type;
- Disturbance or degradation of waters or wetlands subject to U.S. Army Corps of Engineers jurisdiction under the federal Clean Water Act;
- Adverse affects on a population or the critical habitat of rare or endangered plants or animals;
- Substantial interference with the movement of resident or migratory fish or wildlife;
- Substantial reduction in habitat for fish, wildlife, or plants; or
- Conflicts with adopted goals, policies or regulations of relevant regulatory agencies.

Project Impacts

Impacts are evaluated below in detail. *Table 9.2* provides a summary of potential project impacts by project phase, as described in CHAPTER 2, PROJECT DESCRIPTION.

Table 9.2 Potential Biological Resource Impacts by Phase

Project Phase	Potential Impact
Phase A	Less than significant noise impacts upon wildlife due to demolition of the WWTP. Potential impacts to special status bats from demolition of the Bell Gardens Apartments.
Phase B	Less than significant noise impacts upon wildlife due to the construction of the Land Development Building.
Phase C	Impacts to wetland resources due to the construction of the Auburn Justice Center. Less than significant noise impacts upon wildlife due to construction.
Phase D	Impacts to oak trees and oak woodland habitat due to the rough grading for the Children's Emergency Shelter and Women's Center. No impacts to pond habitats. Less than significant construction noise impacts to onsite wildlife. Subsequent project-level environmental review for both projects would assess the potential impacts to oak

Project Phase	Potential Impact
	woodland habitat, and any special status species onsite, related to construction of both facilities.
Phase E	No impact to biological resources during transfer of employees.
Phase F	Potential impact to special status bats due to building demolition. Less than significant construction and demolition noise impacts to onsite wildlife.
Phase G	No impact to biological resources during relocation of occupants.
Phase H	Potential impact to special status bats due to building demolition. Less than significant demolition noise impacts to onsite wildlife.
Phase I	No impact to biological resources during relocation.
Phase J	Potential impact to special status bats due to building demolition. Less than significant demolition noise impacts to onsite wildlife.

Impacts Determined to be Less Than Significant

Substantial Interference with the Movement of Resident or Migratory Fish or Wildlife. Development to the north, east, and south has tended to isolate much of DeWitt Center from surrounding habitats. The area to the west is less developed and probably provides habitat for some wildlife species that may also use the DeWitt property for foraging. In addition, migratory birds may use the property for resting, foraging, and nesting. Field surveys in 2002 and 2003 did not locate areas that could be considered migration corridors for terrestrial species other than birds, and no migratory fish are known to use the site. Not all wildlife habitat will be impacted by project activities, specifically, no impacts to the onsite open water ponds will occur, other than the expansion of associated wetland habitat along the periphery of the upper pond during implementation of *Mitigation Measure 9.3a*. Birds will continue to use this area. Consequently, the movement of migratory fish and wildlife will not be substantially impaired.

Substantial Reduction in Habitat for Fish, Wildlife, or Plants. The majority of DeWitt Center has been in active use since 1942. Although portions of DeWitt Center support oak woodland and other important habitat, the areas impacted by the LDB and AJC have been degraded by earth moving, construction, and other activities. These areas support extensive amounts of ruderal habitat, and impacts to them will not substantially reduce habitat for wildlife. Noise from construction or building demolition may have a temporary impact on some wildlife, but this is not expected to be significant or long lasting.

The isolated wetland swales at the AJC site and within the security perimeter of the Main Jail provide little habitat value because of previous grading and building activities. These swales lack mature riparian vegetation and are surrounded by ruderal upland habitat. As discussed in Impact 9-2 below, the impacts to all wetland areas will be mitigated through onsite habitat replacement, in compliance with U.S. Army Corps of Engineers requirements. Wildlife using the wetland swales at the AJC site will be temporarily displaced but will be able to re-inhabit wetland areas in the DeWitt Center Study Area with implementation of the wetland mitigation. As the swales have a low habitat value, the temporal displacement will be a less than significant impact on wildlife and plant habitat at DeWitt Center.

Onsite habitat areas with high value for fish, wildlife, and plants consist of the open water ponds, wetlands, and oak woodland in the western, southern, and northeastern portions of DeWitt Center. The ponds and wetlands are part of the North Ravine watershed. They drain to

the south, through culverts under Atwood Road, into a southerly flowing intermittent drainage. The onsite open water ponds will not be impacted as a result of the proposed project, and they will continue to drain into the adjacent habitat to the south. The property surrounding this drainage is proposed for development as a residential subdivision, with lots ranging from 4,872 to 37,834 square feet. A middle school is planned for development south of the proposed residential development. Rural residential land uses exist west and south of this area, and suburban residential land uses exist to the east. The existing and future development in the area limits the habitat value of this drainage corridor.

Habitats west of DeWitt Center consist of oak woodland habitat interspersed within a rural residential community. The onsite oak woodland represents the eastern boundary of this habitat. As discussed above, it is likely that some wildlife found in the oak woodland areas to the west of DeWitt Center forage onsite occasionally. Species observed onsite during the 2002 and 2003 surveys are documented in Appendix D. With the exception of the oak titmouse (*Baeolophus inornatus*), none of the species occurring in the oak woodland are considered to be special status species by the local, state, or federal agencies. The oak titmouse is a species of local concern to the U.S. Fish and Wildlife Service. As such, it is of Category 3 significance based on the special status species significance categories discussed in Section 9.1. This indicates that the species has no formal legal or regulatory protection and that impacts to this species are not necessarily significant.

The CES and WC projects are proposed for development in the southwestern corner of DeWitt Center. The proposed DeWitt Government Center Facility Plan includes only rough grading and provision of infrastructure for these two projects, with actual construction and operation to be considered as subsequent projects. This EIR provides a programmatic evaluation of the subsequent development, with project-specific analysis of the rough grading and provision of infrastructure. The proposed grading and provision of infrastructure would result in temporary impacts related to noise and habitat disturbance, including some tree removal, which is discussed further under Impacts 9.1 and 9.2. However, much of the surrounding woodland will remain, and the grading and infrastructure for the proposed CES and WC will not substantially reduce wildlife habitat, including habitat for the oak titmouse. The mitigation measures provided for impacts to the oak woodland vegetation will also serve to improve the habitat value of the woodland.

To be evaluated as separate subsequent development projects, the proposed CES and WC would be designed to have rural residential character consistent with the neighboring residential community to the west. The building design, roadway and infrastructure alignments, lighting, and noise levels at the CES and WC would be similar to that of a rural residential development. Construction of the CES and WC would have temporary impacts to some species. However, as above, much of the surrounding woodland will remain, and the construction and operation of the proposed CES and WC is not expected to substantially reduce wildlife habitat, including habitat for the oak titmouse. These impacts will be evaluated at the project-specific level in subsequent environmental review.

Conflict with Adopted Goals, Policies or Regulations of Relevant Regulatory Agencies. The proposed project is consistent with all applicable goals and policies of Placer County, California Department of Fish and Game, U.S. Fish and Wildlife Service, and U.S. Army Corps of

Engineers. By concentrating development within previously developed and/or disturbed areas within DeWitt Center, impacts to biological resources are minimized. The project is consistent with all applicable goals and policies of the *Auburn/Bowman Community Plan* and *Placer County General Plan*, as listed above, other than as discussed in Impacts 9.1, 9.2, 9.3, and 9.4 below. The project impacts to native trees are mitigated through implementation of the Placer County Tree Protection Ordinance; impacts to the oak woodland habitat are mitigated through habitat restoration, as discussed in Impact 9.1 below; and impacts to wetlands and special status species are adequately mitigated, as discussed in Impacts 9.2 and 9.3.

Potentially Significant Impacts

Impact 9.1: Loss of Native Trees

Significance Before Mitigation:	Significant
Mitigation:	9.1a through 9.1c
Significance After Mitigation:	Less than Significant

Trees at each proposed construction site and at the site of proposed demolition of Buildings 201 through 207 and 211 through 217 were surveyed in spring 2003. Sites of proposed demolition of Buildings 1, 7, 8, and 15 through 18 and the wastewater treatment plant were not surveyed as a brief visual inspection indicated there are no native trees in these locations. *Figure 9-3* shows tree locations within the LDB and AJC sites, while *Figure 9-4* shows the tree mapping data for the CES and WC sites. No native trees were identified in the locations of Buildings 201 through 207 and 211 through 217.

Results from the tree survey indicate that three oak trees, sized 34, 47.5, and 72.5 inches dbh, exist on the LDB site. Two of these trees, numbers 542 and 543 (with 72.5 and 34 inches dbh, respectively) would be removed as part of this proposed project. At the AJC site, the tree survey found two oak trees, 37 and 7 inches dbh. Both of these trees would be removed or impacted during project construction. Review of the tree survey results in conjunction with the CES and WC preliminary site plans indicates that approximately seven oak trees (four blue oaks, two live oaks, and one valley oak [*Quercus lobata*]) would be removed to accommodate those components of the proposed project and 35 additional oak trees along Atwood Road would be removed to accommodate the provision of infrastructure to these sites. The trees along Atwood Road were not included in the tree survey, but would be evaluated during subsequent project-level environmental review of the CES and WC. The seven trees that would be impacted onsite consist of one 12 inch dbh multi-trunked live oak, one 23 inch dbh multi-trunked blue oak, one 19 inch dbh blue oak, one 13 inch dbh blue oak, one 17.5 inch dbh multi-trunked blue oak, one 16 inch dbh multi-trunked live oak, and one 22 inch dbh multi-trunked valley oak. Tree removal impacts at the CES and WC sites would be evaluated during subsequent project-level environmental review of the final site plans prior to construction.

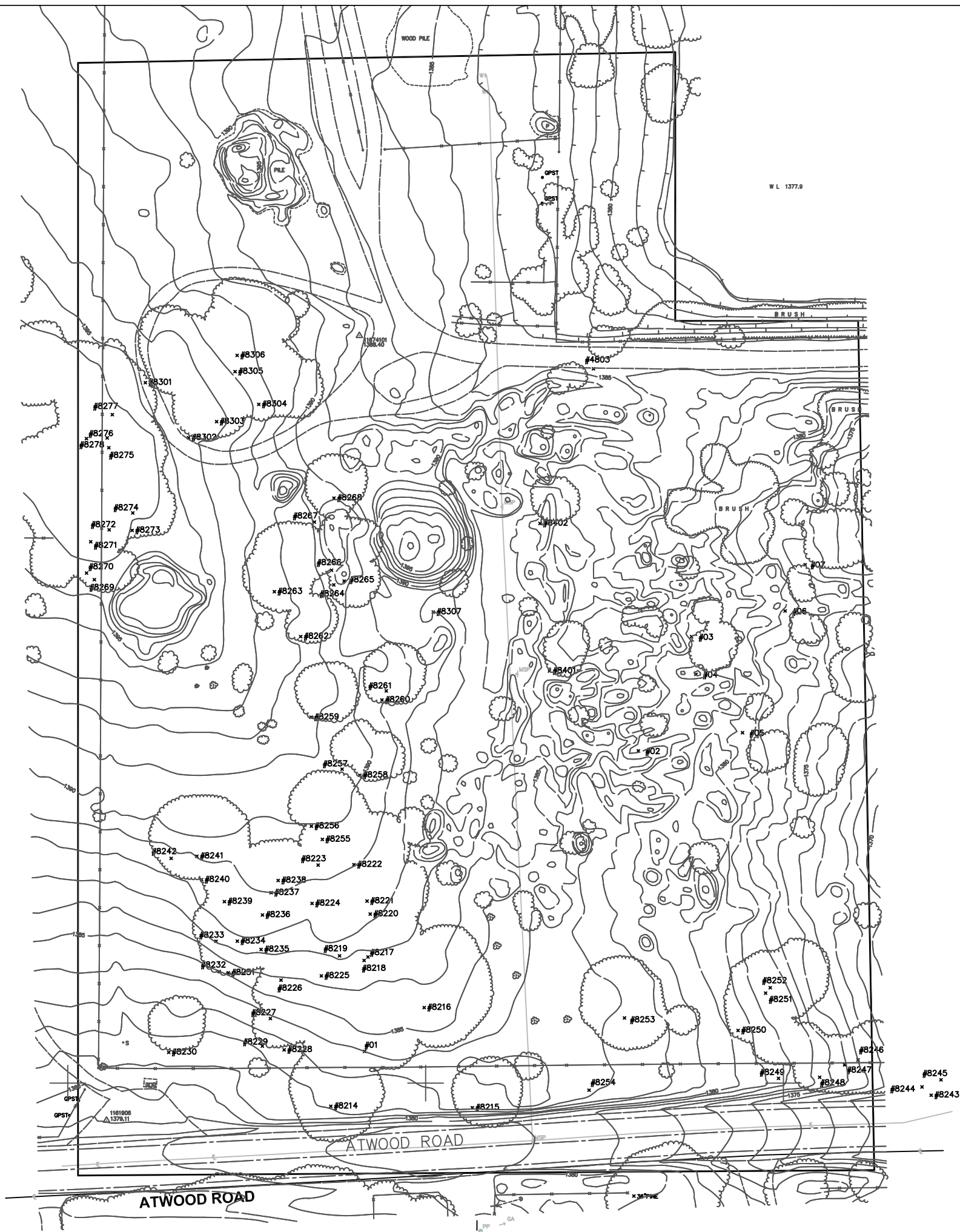
Implementation of standard tree protection fencing during construction and demolition with oversight by an appropriately qualified specialist, as described in *Mitigation Measures 9.1a* and *9.1b*, will minimize impacts to oak trees, while implementation of onsite tree replacement measures pursuant to the Placer County Tree Preservation Ordinance, *Mitigation Measure 9.1c*, will compensate for the loss of trees.



Tree Location and Number
X #8245 Tree Location



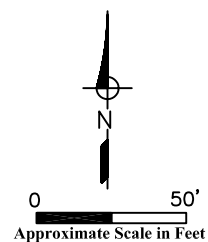
Figure 9-3
TREE SURVEY MAP
(LDB and AJC)
DeWitt Government Center
Facility Plan (2003 - 2020)
Placer County, California



Tree Location and Number
x #8245 Tree Location

NOTES:

- Tree Survey Conducted April and May 2003
- Basemap provided by Andregg, Inc.



Impact 9.2: Disturbance of a Significant Natural Vegetation Type

Significance Before Mitigation:	Significant
Mitigation:	9.2a through 9.2b
Significance After Mitigation:	Less than Significant

Loss of oak woodland vegetation. Approximately 16.25 acres of oak woodland exist on the DeWitt Center property. This vegetation has a high number of native trees, mostly oaks, and a moderate tree canopy. Some of the woodland area has been degraded by previous activities at the site, including earth moving operations, introduction of ornamental and non-native plant species, and stockpiling of solid waste in portions of the woodland. Based on the results of the Tree Assessment for DeWitt Center (NFA 2003), the health of this woodland is fair.

The proposed development of the CES and WC in western portion of the oak woodland would have potentially significant impacts to the woodland vegetation area through the removal of trees and habitat fragmentation. While the preliminary site layout has been designed to minimize impacts to the oak trees on the project site, it is expected that seven trees within a ± 7 -acre project site will be removed or damaged. *Figure 9-4* shows tree mapping data for the oak woodland in the CES and WC sites. Additional impacts to the oak woodland are expected to result from the implementation of *Mitigation Measure 9.3a*, which requires the creation of new wetland habitats adjacent to the onsite open water ponds. The location of the proposed wetland creation currently supports riparian upland and oak woodland habitat.

Mitigation measures to be implemented will minimize and compensate for impacts to the oak woodland vegetation. In addition to *Mitigation Measure 9.1a*, which requires standard tree protection fencing during construction, *Mitigation Measure 9.1b* which requires oversight by an appropriately qualified specialist, and *Mitigation Measure 9.1c*, which requires replacement of individual tree loss pursuant to the Placer County Tree Preservation Ordinance, impacts to oak woodland vegetation will be mitigated through designation of a tree preservation easement and development of an onsite habitat restoration and monitoring plan, as described in *Mitigation Measure 9.2a*. The restoration plan will include mitigation of impacts to oak woodland resulting from the wetland creation program. Implementation of these measures will reduce impacts to this vegetation to less than significant levels.

Loss of riparian upland. Habitat mapping indicates that three acres of riparian upland exist in the DeWitt Center Study Area. Approximately one-half acre of riparian upland will be impacted as a result of the proposed project and future anticipated development within the DeWitt Center, although some of this development is not included in the currently proposed DeWitt Government Center Facility Plan (2003 – 2010). This habitat is associated with riparian wetland, and it is uniquely valuable and significant as it provides cover, foraging ground, and nesting habitat for many animal species. In addition, the extended wet period and higher density of vegetation in the riparian upland increases the food base, attracting more animal species than in drier habitats. The future anticipated impacts to riparian upland would be mitigated concurrently with mitigation of impacts to wetlands through implementation of *Mitigation Measure 9.2b*.

Impact 9.3: Disturbance or Degradation of Waters or Wetlands Subject to U.S. Army Corps of Engineers Jurisdiction Under the Federal Clean Water Act

Significance Before Mitigation:	Significant
Mitigation:	9.3a through 9.3d
Significance After Mitigation:	Less than Significant

The proposed project would impact wetland swales at the proposed AJC site and within the security perimeter of the Main Jail. The swale within the AJC site would be impacted by construction of the parking lot. The swale within the Main Jail security perimeter would be filled in order to improve security at the jail. In their current condition, the swale and its associated vegetation provide potential hiding and escape areas for inmates and obstruct views across the security perimeter that are required to be maintained in an open condition by Department of Justice standards. The project proposes installing culverts in both locations to maintain the water flow through the site. Both swales drain to the onsite water detention pond south of the Main Jail.

The County proposes to mitigate impacts to these wetlands through a program of onsite wetland creation and enhancement. The County has applied to the U.S. Army Corps of Engineers for a Permit authorizing impacts to waters of the United States. Included in that application is a mitigation and monitoring plan to offset those impacts. The mitigation program is discussed in *Mitigation Measure 9.3a*, which would ensure that the County meets the “no net loss” of wetland habitat standard of the Corps. The County will also apply for a 401 Water Quality Certification from the Regional Water Quality Control Board. Receipt of the 401 Certification is a condition of the Corps permit.

In addition to wetland impacts from the currently proposed DeWitt Government Center Facility Plan (2003 – 2010), the County is anticipating future wetland impacts throughout DeWitt Center. The areas where future impacts are anticipated include the wetlands surrounding the Richardson Drive/Atwood Road intersection, and a wetland in the northeastern portion of the property, east of Kemper Canal. *Figure 9-2*, the Wetland Delineation Map, indicates the location and type of all onsite waters and wetlands under the jurisdiction of the Corps. These anticipated impacts are included in the Corps Permit application and mitigation program. This mitigation approach prevents piecemeal wetland mitigation and allows for all of the project related and anticipated future wetland impacts to be mitigated in one coordinated program.

Impacts to wetlands could also occur as a result of erosion during project demolition and construction and during the future construction of the CES and WC projects. Erosion at the LDB and AJC sites could contribute to sedimentation of the detention pond south of the Jail, and the detention basin west of the Jail, while erosion during rough grading and installation of infrastructure at the CES and WC sites could contribute to sedimentation of the waters and wetlands associated with the open water ponds onsite. *Mitigation Measures 9.3b* and *9.3c* require the use Best Management Practices for sediment and erosion control to prevent sediment from entering the wetland areas.

In addition to the potential for erosion and sedimentation, the future site design of the CES and WC projects could lead to continuing impacts to the waters and wetlands associated with the open water ponds onsite due to runoff from the sites if the facilities are located too close to

those resources. *Mitigation Measure 9.3d* establishes development setbacks from the riparian wetland habitat associated with both open water ponds. These setbacks would be implemented during the future construction of the CES and WC to avoid further impacts to wetlands.

Impact 9.4: Adverse Affects on a Population or the Critical Habitat of Rare or Endangered Plants or Animals

Significance Before Mitigation:	Significant
Mitigation:	9.4a through 9.4c
Significance After Mitigation:	Less than Significant

The potential for special status plant and animal species to occur onsite is discussed in the Setting section of this chapter. That analysis, which is based on site surveys conducted during spring 2002 and spring 2003, found that western pond turtles do occur in the open water pond onsite. This habitat area will not be impacted by the proposed project, other than through the wetland expansion and creation program required as mitigation for project and future impacts to existing wetlands. The wetland mitigation program is designed to improve onsite habitat and will not result in adverse impacts to special status species using the onsite ponds for habitat.

The site surveys did not find any other special status species to be nesting or otherwise utilizing the project area for any of its life cycle, although the project area may provide suitable nesting habitat for some birds. A white-tailed kite was observed in March of 2002 and in May 2003 foraging in the southwestern portion of DeWitt Center, between the oak woodland and the lower onsite open water pond. Impacts to foraging habitat are not considered significant. *Mitigation Measure 9.4a* requires that pre-construction surveys for nesting raptors be conducted and establishes minimum setbacks from nest trees, if any are found.

The oak titmouse is a species listed by the U.S. Fish and Wildlife Service as a species of local concern. This species is of Category 3 Significance, meaning that the species has no legal or regulatory protection, and impacts to it are not necessarily significant. The oak titmouse inhabits the oak woodland habitat onsite. Impacts related to loss or degradation of oak woodland are addressed in Impact 9.2. Mitigation of those impacts pursuant to *Mitigation Measures 9.2a* and *9.2b* will serve to mitigate any impacts to the oak titmouse.

Additionally, there is potential for three special status bat species to roost within the existing buildings onsite. It is known that some bats do roost in these buildings, but surveys were not done to determine specific species because such surveys are impractical and not fully reliable. Therefore, it is assumed that special status bat species **do** occur in the buildings proposed for demolition. *Mitigation Measures 9.4b* and *9.4c* provide the best-known feasible mitigation to avoid impacts to individual bats and to compensate for the loss of habitat. Due to a lack of substantial research on the special status bat species with potential to occur onsite, the California Department of Fish and Game and the U.S. Fish and Wildlife Service have not established protocols for surveys or measures for assessing and mitigating impacts to these species. This EIR relies on the best-known feasible and most commonly used mitigation measures, in compliance with the standards expressed in Section 15126.4 of the CEQA Guidelines.

9.4 MITIGATION MEASURES

Loss of Native Trees

Mitigation Measure 9.1a: Implement *Mitigation Measure 5.1ba*, which requires provision of tree protection fencing during construction.

Mitigation Measure 9.1b: Implement *Mitigation Measure 5.1cb*, which requires an appropriately qualified specialist to oversee proposed improvements that may affect any tree to be preserved.

Mitigation Measure 9.1c: Implement *Mitigation Measure 5.1ed*, which requires planting of trees to replace native trees impacted or removed during construction.

Disturbance of a Significant Natural Vegetation Type

Mitigation Measure 9.2a: The County shall submit a habitat restoration and monitoring program to the Planning Department and the Department of Public Works for approval prior to issuance of a grading permit for any grading operations that impact the oak woodland. The habitat restoration shall occur in the onsite oak woodland habitat and adjacent ruderal habitat. The County shall implement the restoration program concurrent with implementation of grading and construction projects that impact the oak woodland and must demonstrate compliance with the preliminary phases of the restoration and monitoring program prior to issuance of Certificates of Occupancy for projects that impact the oak woodland. This program shall cover an area two times the size of the oak woodland habitat area directly impacted by the proposed project (i.e., through construction of the Children's Emergency Shelter, construction of the Women's Center, and/or implementation of *Mitigation Measure 9.3a*). This program shall be developed by an ISA certified arborist, Registered Forester, or Landscape Architect and shall include removal of debris and non native ground cover and shrubs from the restoration area, as well as planting of valley oaks and interior live oaks at a density of approximately 50 plants per acre spaced randomly about 30 feet apart. The restoration program shall include a mitigation monitoring program that includes visual inspections of planted trees a minimum of one time per year for five years. Any trees that do not survive during the five year monitoring program shall be replaced.

Mitigation Measure 9.2b: Impacts to upland riparian habitats will be mitigated through implementation of the wetland mitigation and monitoring plan submitted to and approved by the Corps of Engineers (refer to *Mitigation Measure 9.3a*).

Disturbance or Degradation of Wetlands

Mitigation Measure 9.3a: The County shall implement a wetland creation and monitoring program as approved by the U.S. Army Corps of Engineers in conjunction with their issuance of a Nationwide Permit. The County will submit an application for this permit in September 2003. The application includes a conceptual wetland mitigation and monitoring plan to offset anticipated impacts to wetlands. The proposed wetland mitigation plan includes expansion of portions of the riparian wetland areas

adjacent to the open water ponds, for a minimum of 0.5 acres of created wetlands to mitigate impacts to 0.46 acres, ensuring compliance with the U.S. Army Corps of Engineers' "no net loss" policy. Wetland habitat creation shall include revegetation of the area using native shrubs, trees, and wetland plant species. The County shall continue to work with the U.S. Army Corps of Engineers and a qualified wetland scientist to finalize and implement the wetland mitigation and monitoring program. The wetland mitigation and monitoring plan shall commence prior to occurrence of impacts to any onsite wetlands.

Mitigation Measure 9.3b: Implement *Mitigation Measure 7.1a*, which stipulates required components of a Construction Emission/Dust and Erosion Control Plan.

Mitigation Measure 9.3c: The County shall incorporate additional Best Management Practices to control erosion and sedimentation of onsite drainageways during demolition at the Wastewater Treatment Plant, Land Development Building site, and other building demolition sites; during construction at the sites of the Land Development Building and Auburn Justice Center; during placement of the excess material from the expansion of the DeWitt Center Detention Basin; during rough grading and installation of infrastructure at the Children's Emergency Shelter and Women's Center sites; during installation/provision of any other infrastructure needed to serve the projects included in the proposed DeWitt Government Center Facility Plan; and during project operation. Best Management Practices for erosion and sediment control shall include the following measures:

- a) Maintain 50-foot setbacks for construction and grading activities from intermittent streams, riparian areas, and wetlands.
- b) Prepare a winterization plan for sites where construction is not completed by October 15.
- c) Minimize the depths of cuts and fills to the extent feasible.
- d) Use measures to prevent eroded soil from entering site drainageways, including: placement of hay bales or other acceptable materials such as sediment barriers, installation of temporary earth berms, use of fabric silt fences, spreading hay or straw on exposed area, development of temporary settling areas and use of other means for slowing runoff and reducing sediment loads. Sediment collected at the erosion control sites shall be collected and disposed of once revegetation has become established. Specifications for silt fencing shall be included on final grading plans for each project area.
- e) For surfaces at any project site that are not revegetated or covered, the County shall implement other BMPs to minimize discharge of sediments offsite such as filter strips or vegetated swales.
- f) Design new storm drains throughout the project area to trap sediment and trash. Establish a program of routine maintenance to ensure their continued effectiveness.
- g) Minimize drainage concentration from impervious surfaces using construction management techniques and erosion protection at culvert outfall locations.

- h) Storm drainage from onsite impervious surfaces shall be collected and routed through specially designed catchbasins, vaults, filters, etc. for entrapment of sediment, debris and oils/greases as approved by DPW. A monitoring program that includes monthly parking lot sweeping and vacuuming, and catchbasin cleaning program shall be provided to DPW for approval prior to issuance of grading permits for each project site.

Mitigation Measure 9.3d: Final site plans for the Children's Emergency Shelter and Women's Center projects shall incorporate setback easements from wetlands, riparian vegetation, and the open water ponds. Setbacks shall be a minimum of 50 feet from the closest edge of existing wetland, vegetation, or pond to the landscaping associated with each building and/or parking area, in compliance with Policy 6.A.1 of the *Placer County General Plan*. Setbacks from created wetlands shall be a minimum of 75 feet. No grading, paving, construction, or landscaping shall occur within these setbacks unless the location is necessary for the construction of new roads or infrastructure to serve the Children's Emergency Shelter and Women's Center projects.

Adverse Affects on a Population or the Critical Habitat of Rare or Endangered Plants or Animals

Mitigation Measure 9.4a: Pre-construction surveys at the proposed Children's Emergency Shelter and Women's Center sites shall be undertaken during the raptor nesting season (March through August) within 30 days prior to the commencement of site preparation activities to identify if active nests are in the grading and construction areas and would be impacted. If they are determined to be onsite, no grading or heavy construction activity shall take place within close proximity to the nest until nesting is completed and any young are successfully fledged. Nest trees themselves shall be preserved. The County or other project applicant (i.e., in the case of the Women's Center) shall consult with the California Department of Fish and Game to determine the appropriate construction setback from nest trees. Typically the California Department of Fish and Game requires a 500-foot setback, but the setback can be a minimum of 300 feet.

Mitigation Measure 9.4b: The County shall install bat excluders in every building to be demolished for a minimum of six weeks prior to demolition. The excluders shall be installed following the maternity season, which occurs from April to the end of June and shall remain in place until building demolition occurs.

Mitigation Measure 9.4c: The County shall install bat boxes throughout the onsite oak woodland and associated ruderal habitat. The County shall consult with the California Bat Conservation Fund and the California Department of Fish and Game to determine the appropriate specifications, numbers, and placement of the bat boxes. The County shall develop a monitoring program for this mitigation measure that will include visual inspections of each bat box every four months for five years. The visual inspections will be conducted to ensure that each box remains in good condition and to record observation data regarding indications of usage of the boxes.

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CHAPTER 10

GEOLOGY, SOILS AND SEISMICITY

CHAPTER 10 GEOLOGY, SOILS, AND SEISMICITY

10.1 SETTING

The DeWitt Center Study Area is located in the western foothills of the Sierra Nevada mountain range at an elevation of about 1,400 feet in a complex geologic environment. Elevations across the project area range from 1,375 to 1,435 feet. Slopes within DeWitt Center generally range from 2 to 15 percent. *Figure 2-1* in **CHAPTER 2, PROJECT DESCRIPTION** provides the USGS topographical data for the project site.

This chapter is based on the *DeWitt Center Existing Conditions Report* (NFA/URS 2002), the *Geotechnical Engineering Report for Land Development Building* and *Geotechnical Engineering Report for Auburn Justice Center* prepared by Holdrege & Kull in November 2002 (2002a and 2002b, respectively), and the U.S. Department of Agriculture (USDA) Soil Conservation Service *Soil Survey for Placer County* (1980). The geotechnical engineering reports are included in this EIR as Appendix E. Additional geotechnical engineering reports will be prepared for the Children's Emergency Shelter and Women's Center (CES and WC) projects during subsequent project-level environmental review.

Geology

Geologic history has been divided into many eras representing chapters of Earth's past. The three most recent eras are the Cenozoic (65 million years ago to today), Mesozoic (248 to 65 million years ago), and Paleozoic (543 to 248 million years ago). The Jurassic Period represents a portion of the Mesozoic Era and dates between 144 and 206 million years ago. The Quaternary Period covers a portion of the Cenozoic Era and dates from 1.8 million years ago to today. The geologic history of the rocks and soils within the project area can be traced back to their origins in some of these historic time periods.

The western slope of the Sierra Nevada is underlain by a series of metamorphic rock assemblages that trend NNW-SSE between the Mesozoic granitics of the Sierra Nevada batholiths on the east and the sediment-filled Sacramento Valley to the west. These metamorphic rocks were developed by convergent plate tectonics in the Early Paleozoic to Late Jurassic (400 to 120 million years ago) and consist of three northerly-trending units bound by faults and classified on the basis of age and lithology: the Eastern, Central, and Western metamorphic terranes (NFA/URS 2002).

DeWitt Center is located in the eastern portion of the Western Metamorphic Terrane, predominantly consisting of Jurassic igneous and sedimentary rocks of island-arc origin. The site is underlain by rocks known as the Smartville Complex, composed of mafic/intermediate volcanic and plutonic rocks formed along an island-arc chain, whose outcrops west of State Route 49 are controlled by NW-trending gently dipping folds that fall to the SE (NFA/URS 2002). *Figure 10-1* is a geologic map of the region surrounding DeWitt Center, which indicates that bedding in the vicinity of the site trends NW to SE and dips from 15 to 70 degrees towards the NE.

Soils

Approximately 95 percent of the DeWitt Center Study Area is underlain by soil identified as Auburn silt loam with 2 to 15 percent slopes; the remainder is underlain by Auburn-Rock outcrop complex with 2 to 30 percent slopes (USDA Soil Conservation Service 1980). The dominant soil is a shallow, undulating to rolling, well-drained material underlain by vertically tilted metamorphic rock and formed as a residual deposit due to the weathering of the parent rock. The Auburn-Rock outcrop complex occurs in only two locations: along the extreme western margin of DeWitt Center west of the abandoned wastewater treatment pond; and along Atwood Road south of the Main Jail. It is characterized as approximately 60 percent Auburn soil (described above) and 15 percent metamorphic rock outcrop exposed on the rocky side slopes. The soil is shallow, well drained, and moderately permeable, with very rapid surface runoff, and formed by the weathering of the underlying vertically tilted metabasic bedrock. Neither the Auburn silt loam nor the Auburn-Rock outcrop falls within the Class I or II capability classes, which are the classes most favorable for agricultural production. Individual characteristics of the soil units are as follows. *Figure 10-2* maps the soil types at DeWitt Center.

Auburn Silt Loam

This is the predominant soil type on the project site. It is a shallow, undulating to rolling, well drained soil, underlain by metamorphic rock. The shallowness leads to moderate permeability and surface runoff. The erosion hazard is slight to moderate. This soil is mainly used for irrigated pasture and rangeland, with some areas used for deciduous orchards. The major limitation to urban use is the depth to rock, which limits the potential for septic systems (which are not included in the proposed project).

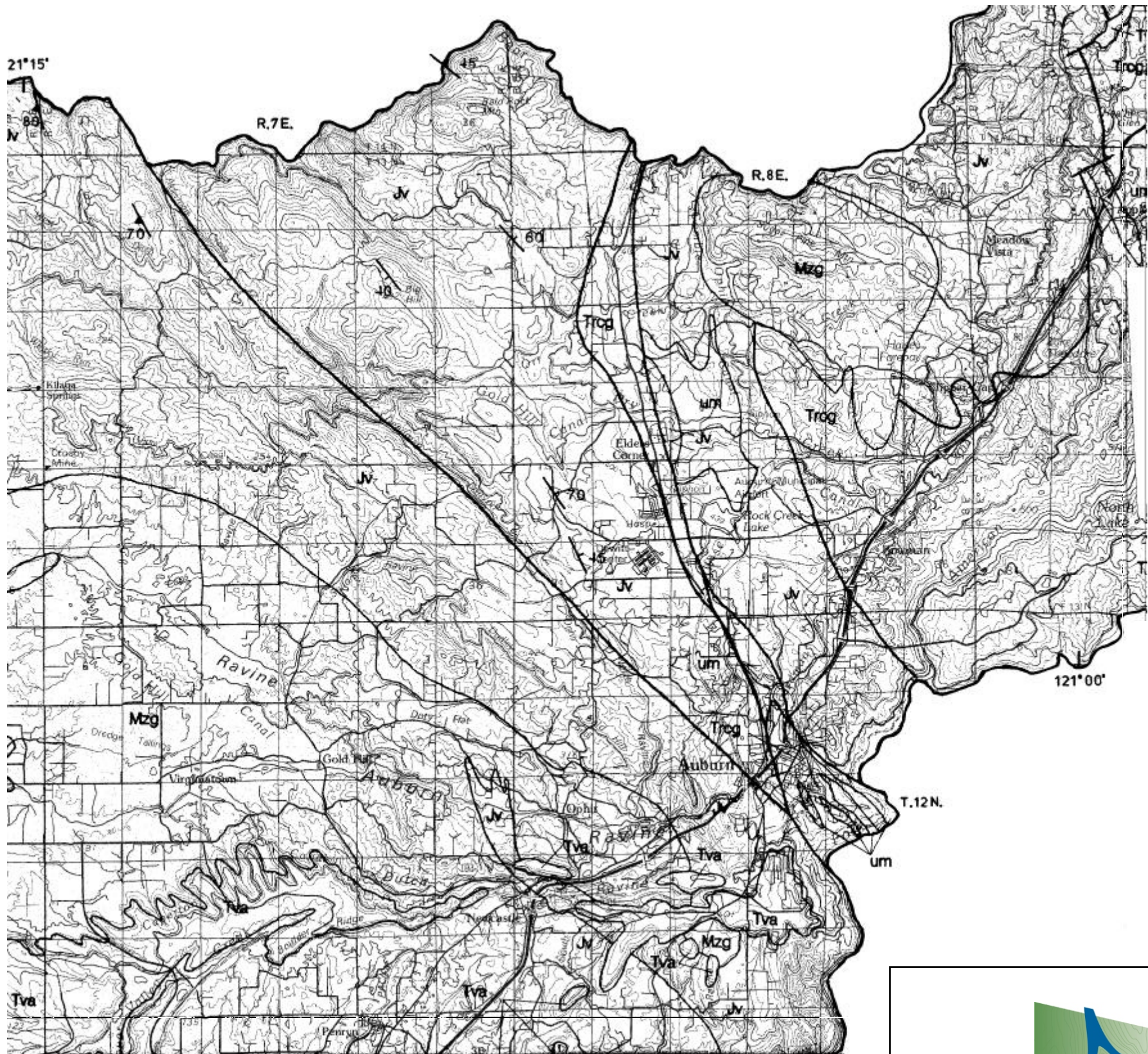
Auburn-Rock Outcrop Complex

This undulating to hilly soil and rock outcrop soil type occurs at the northeastern boundary and southwestern quarter of the project site. The Auburn soil, which makes up approximately 60 percent of this complex, is shallow and well drained. Surface runoff is medium-to-rapid, with erosion hazard ranging from slight-to-high. This soil complex is mostly used for annual rangeland. The major limitations to urban use are rock outcrops, the depth to rock, and the slopes. Cuts and fills generally need to be limited to approximately six feet, and the potential for individual septic systems is limited.

Geotechnical Exploration

In order to assess geology and soils on a local project level, Holdrege & Kull performed geotechnical evaluations of the proposed Land Development Building (LDB) site and the proposed Auburn Justice Center (AJC) site. They excavated seven exploratory trenches on the proposed LDB site and fifteen exploratory trenches on the proposed AJC site. The trenches were excavated using a Case 580 backhoe which reached a maximum depth of 4.5 feet at the LDB site and 9 feet at the AJC site. Exploration below these depths was limited by resistant metamorphic rock.

The *Geotechnical Engineering Report for Land Development Building* and *Geotechnical Engineering Report for Auburn Justice Center* (Holdrege & Kull 2002a and 2002b, respectively) will be submitted to the Placer County Department of Public Works for review and approval in

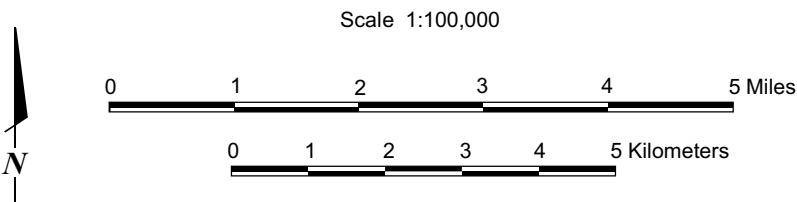


EXPLANATION

- Tva Undifferentiated Tertiary andesitic mudflows, volcanic breccias, pyroclastic deposits, lava flows, and sedimentary fluvial deposits composed almost entirely of andesitic material. These deposits are traditionally mapped as Mehrten Formation in Sierra Nevada foothill region.
- Mzg Mesozoic intrusive rock of the Sierra Nevada batholith and related plutons ranging in composition from diorite to granite.
- um Mesozoic and Paleozoic serpentinized ultramafic rock.
- Jv Volcanic rocks composed mainly of mafic to intermediate volcanic flows, flow breccias, tuff breccias, along with volcaniclastic and volcanic-derived sediments and small gabbroic intrusions. Includes rocks of the Smartville and Lake Combie volcanic complexes.
- Trcg Clipper Gap Formation: Highly disrupted assemblage of thin to massive beds of chert and argillite with small, isolated lenses of limestone (Trls). Locally tectonically intermixed within a slate matrix (sedimentary melange).

SYMBOLS

- Geologic Contact
- Fault
- 70 | Strike & Dip of Bed
- 70 ▲ Strike & Dip of Foliation



Reference: Mineral Land Classification of Placer County; DMG Open File Report 95-10
R. Loyd, 1995

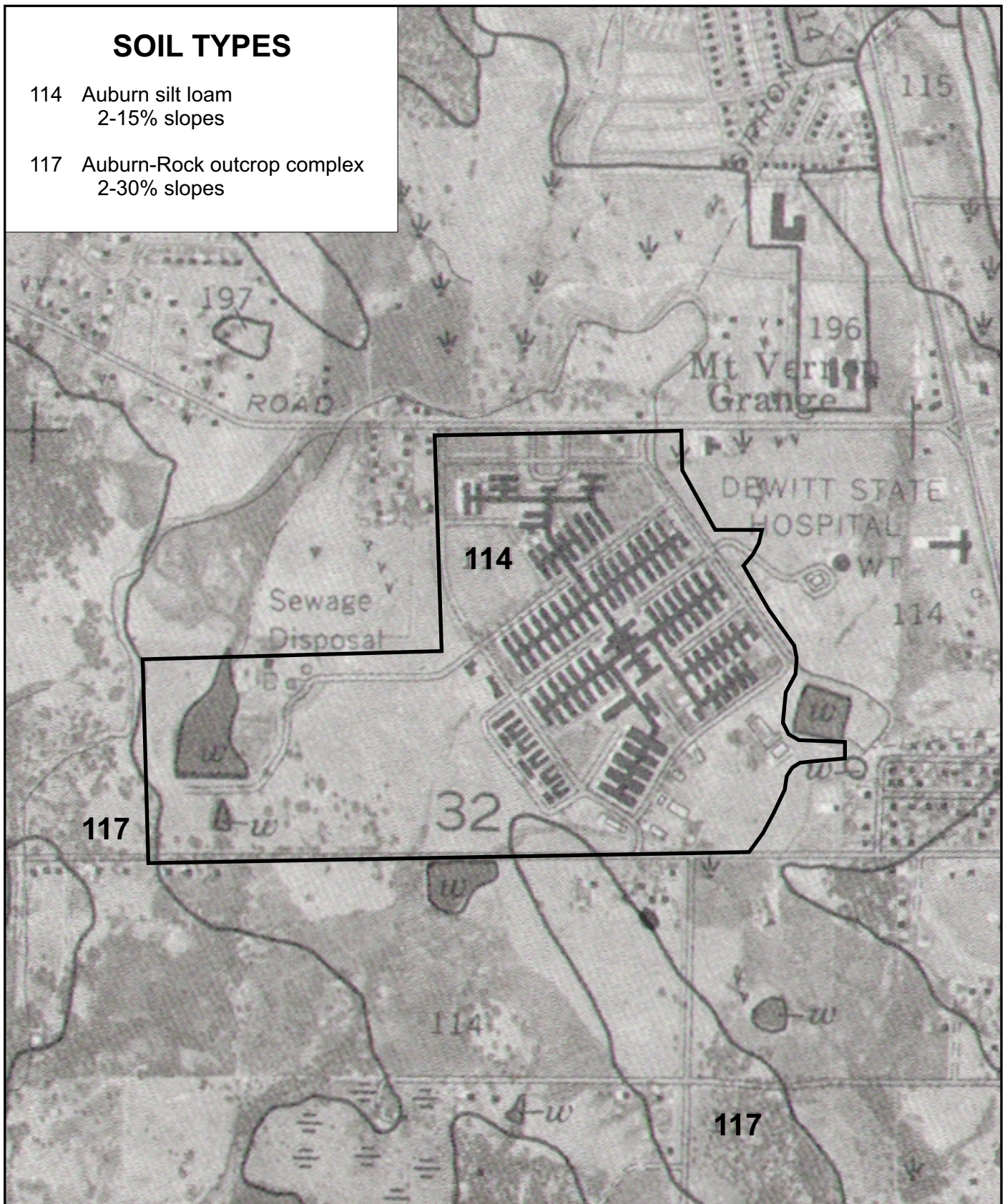


Figure 10-1

REGIONAL GEOLOGY
*DeWitt Government Center
Facility Plan (2003 - 2010)*
Placer County, California

SOIL TYPES

- 114 Auburn silt loam
2-15% slopes
- 117 Auburn-Rock outcrop complex
2-30% slopes



0 400 800
Approximate scale in feet



Basemap: Auburn, CA Soil Survey
Soil Conservation Service, USDA

Figure 10-2

SOIL MAP

*DeWitt Government Center
Facility Plan (2003 - 2010)*
Placer County, California

conjunction with applications for grading permits. Appropriate recommendations contained in the reports will be incorporated into Improvement Plans and Building Plans for each project site. Separate site-specific geotechnical engineering reports will be prepared for both the Children's Emergency Shelter and Women's Center projects and submitted to the Department of Public Works for approval in conjunction with grading permit applications.

Land Development Building

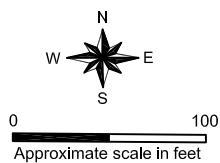
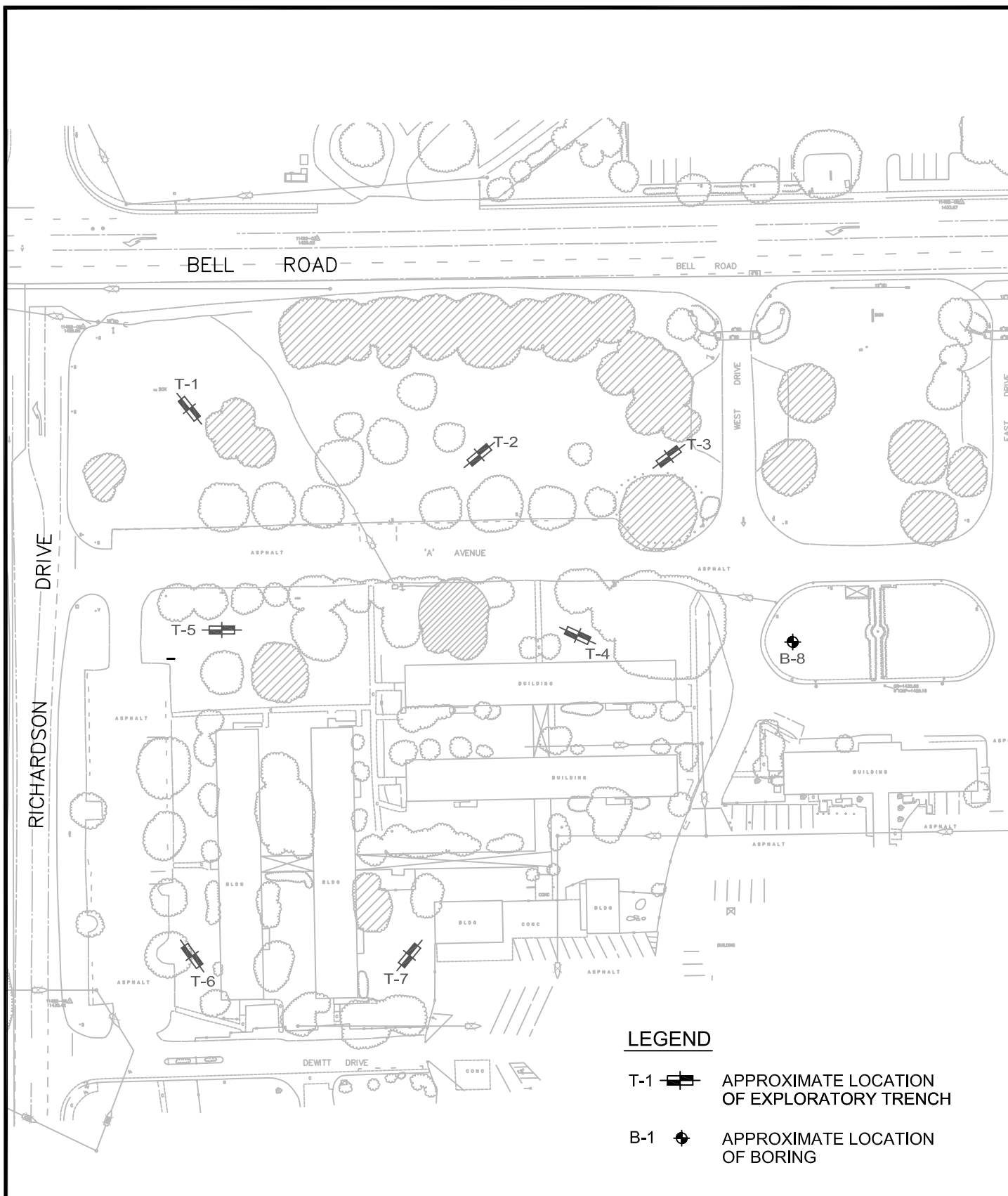
At the proposed LDB site, the trenches revealed that the surface soil consists mostly of native, residual soil underlain at shallow depths by severely to moderately weathered rock. Expansive clay was observed in two trenches at a depth of two to three feet. However, these exploratory trenches were located outside of the proposed building construction area. According to Holdrege & Kull, the expansive soil was generally encountered immediately above weathered metamorphic rock, and exhibited high expansion potential as classified under the Uniform Building Code guidelines. In addition, a deep sanitary sewer trench was observed during excavation of trench T-1, revealing a portion of backfill that was relatively dense, containing abundant gravel and angular rock up to twelve inches in diameter. *Figure 10-3* shows the locations of the exploratory trenches; deposits of expansive soil were found in trenches T-3 and T-4.

Auburn Justice Center

At the proposed AJC site, the trenches revealed that the majority of the central portion of the site is covered with existing fill and stockpiled soil that is deeper than ten feet in some areas. In the regions that were not covered by fill and stockpiled soil, the surface soil consists mostly of native, residual soil underlain at shallow depths by severely to moderately weathered rock. The trenches did not reveal any expansive soil. *Figure 10-4* shows the locations of the exploratory trenches. In addition, Holdrege & Kull observed a rock outcrop near the southeast and central-east portions of the site, and a drainage channel that bisects the southwest side of the site. This drainage is discussed as a wetland swale in **CHAPTER 9, BIOLOGICAL RESOURCES**.

Mineral Resources

The best assessment of mineral resources in the study area is the Mineral Land Classification of Placer County, prepared by the California Division of Mines and Geology in 1995 (Open File Report 95-10). A review of this document indicates that there were six mines or prospects, five gold and one copper, located within 2 miles of DeWitt Center. One of these mines or prospects is plotted as occurring on the DeWitt Center property, but the accuracy of the mapping is questionable. Open File Report 95-10 identifies the mine/prospect as the Black Ledge, located within a half mile of the project area. However, review of the primary reference cited is confusing. The Black Ledge is not discussed; rather, reference is made to "Black Lead, a former producer," which lies nearby to the south of the Two Orphans prospect and is within approximately one mile of the project area. No details are provided regarding specific location, vein orientation, and production history. No surface evidence has been found concerning this gold mine or prospect. Based on the existing mapping, known mine locations, and the lack of surface evidence of mining onsite, it is unlikely that the project area represents a source of known mineral reserves.



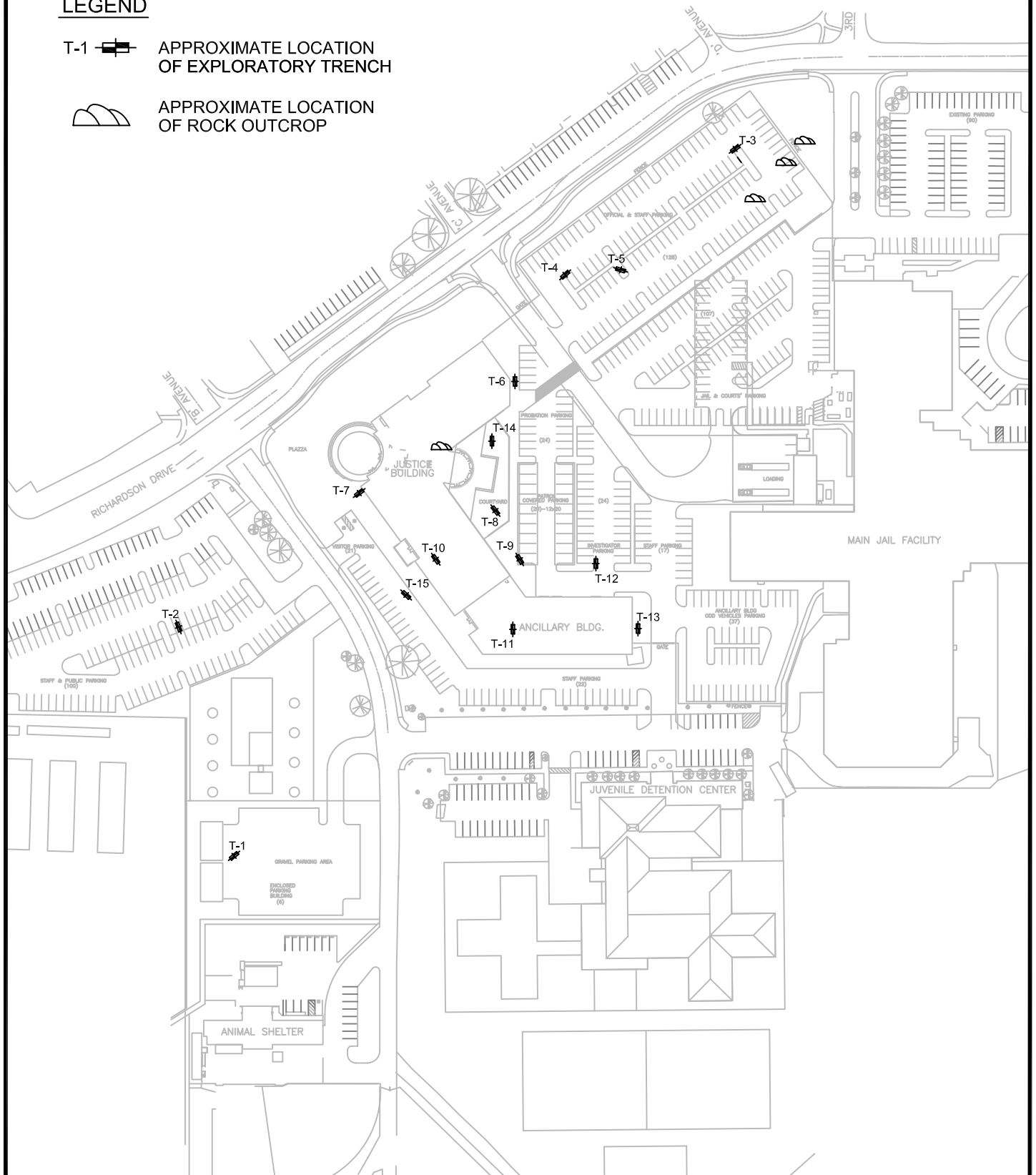
Basemap provided by: Andregg, Inc.
Source: Holdrege and Kull

Figure 10-3
TRENCH AND BORING LOCATIONS
Land Development Building
DeWitt Government Center
Facility Plan (2003-2010)
Placer County, California

LEGEND

T-1  APPROXIMATE LOCATION
OF EXPLORATORY TRENCH

 APPROXIMATE LOCATION
OF ROCK OUTCROP



0 2000
Approximate scale in feet

Basemap provided by: Andregg, Inc.
Source: Holdrege and Kull

Figure 10-4
TRENCH AND
BORING LOCATIONS
Auburn Justice Center
DeWitt Government Center
Facility Plan (2003-2010)
Placer County, California

Seismicity

The foothills of the Sierra Nevada are characterized by low seismicity. Data compiled between 1808 and 1987 show that only 15 earthquakes between magnitudes 3.0 and 5.7 were recorded along the Foothills Fault System between Mariposa and Oroville. Studies of past seismic events conclude that the maximum credible earthquake for the Foothills Fault System would be a Richter magnitude 6.5 event (NFA/URS 2002).

Surface soil in the project area is generally relatively thin and unsaturated, and the site is underlain at shallow depths by dense, metavolcanic rock. This combination results in a low potential for liquefaction and lateral spreading at the site.

Faulting

DeWitt Center is located in the western portion of the Foothills Fault System, between the Melones Fault Zone about 15 miles to the east and the Bear Mountain Fault Zone within about one mile to the west. With the occurrence of the 1975 magnitude 5.7 Oroville earthquake, located on the Cleveland Hill Fault in the northern portion of this fault system, and the 1989 magnitude 4.3 Emigrant Gap earthquake, located in eastern Placer County, the Foothills Fault System is considered to have a low to moderate level of activity. Significant investigations have occurred along the trend of the Foothills Fault System since 1975. The three segments of the Bear Mountain Fault Zone identified on the Fault Activity Map of California and Adjacent Areas closest to DeWitt Center are the Highway 49 Lineament eight miles to the north, the Maidu East Lineament four miles to the southeast, and the Rescue Lineament eleven miles to the southeast. These faults are classified by the California Division of Mines and Geology (CDMG) as having last moved in the Late Quaternary (the last 700,000 years) (NFA/URS 2002).

Consultants to the U.S. Bureau of Reclamation Extension conducted geoseismic studies associated with the proposed Auburn Dam after the 1975 Oroville earthquake. One of the geologic structures evaluated was the DeWitt lineament or fault zone, which had been identified by geologic mapping and air photo interpretation. The DeWitt Fault Zone trends in a NW-SE direction from the Bear River through Auburn (NFA/URS 2002). Woodward-Clyde Consultants excavated and logged three exploratory trenches across this feature as follows:

- Hubbard Road site – located southeast of Big Hill near Dry Creek, about two miles northwest of DeWitt Center;
- Bean Road site – about five miles due south of DeWitt Center; and
- St. Joseph site – about six-tenths of a mile southeast of DeWitt Center (Schwartz et al., 1977).

The results of the trenching studies indicated that the DeWitt Fault Zone is a significant zone of deformation generated during episodes of fault movement in the Mesozoic, with evidence of late Quaternary displacement at the Hubbard Road site.

The CDMG investigated the DeWitt segment of the Bear Mountain Fault Zone north of Auburn as part of the 10-year fault evaluation program (NFA/URS 2002). This study indicated that deformation along the Bear Mountain Fault Zone is occurring near Auburn. However, this strain is distributed along several Mesozoic-age shear zones over a several mile wide zone. Holocene (the last 11,000 years) faulting could not be ruled out along the DeWitt Fault Zone,

but the zone is not well defined and displacement rates are probably too small to produce significant surface rupture. Therefore, the DeWitt Fault Zone has not been designated as a special study zone under the provisions of the Alquist-Priolo Act (NFA/URS 2002).

10.2 REGULATORY FRAMEWORK

Soils disturbance, including grading and other site preparation activities, are primarily regulated at the local level through the *Auburn/Bowman Community Plan* and *Placer County General Plan*, but may be subject to State and federal regulations as well. The *Placer County Grading Ordinance* establishes requirements for grading, erosion control, and stormwater design with which development projects must comply during grading and construction. Other responsible agencies, including the U.S. Army Corps of Engineers, the State Water Resources Control Board, and California Department of Fish and Game have also developed standards and guidelines.

Auburn/Bowman Community Plan

The *Auburn/Bowman Community Plan* contains policies governing development in the project vicinity. Below is a list of geology and soils goals and policies, found in the Environmental Resources Management Element of the *Auburn/Bowman Community Plan*, that are applicable to the DeWitt Government Center Facility Plan project.

Goals IV.B.1a

1. Conservation of soils as a valuable natural resource.
 2. Minimize soil loss due to accelerated erosion.
 3. Minimize the conversion of soils suitable for agricultural purposes to non-agricultural uses.
- IV.B.1.b(1) Utilize the existing inventory of important resources prior to the project development. In the absence of more detailed site specific studies, determination of soil suitability for particular land uses shall be made according to the Soil Conservation Service's Soil Survey of Placer County.
- IV.B.1.b(4) Ensure implementation of the *Placer County Grading Ordinance* to protect against sedimentation and soil erosion.
- IV.B.1.b(6) Developers shall provide adequate drainage and erosion control during construction as described in the *Placer County Land Development Manual*.

Goals IV.B.2.a

1. Minimize loss of life, injury, damage to property, and impacts to human health resulting from geological hazards.
 2. Identify and protect important geological and mineral resources in the plan area.
- B.2.b(2) Require a soils report on all building permits and grading permits within areas of known slope instability or where significant potential hazard has been identified.

- B.2.b(4) During project review, consider the development limitations of geologic formations.
- C.2.a Protect all economically valuable resources, including mineral deposits, soils conducive to agricultural uses, and those open areas which add to the overall attractiveness of the region.

Placer County General Plan

The Health and Safety Element and the Land Use Element of the *Placer County General Plan* contain goals and policies which, in part, frame the discussion of project impacts related to geologic hazards. The geology and soils goals and policies applicable to the DeWitt Government Center Facility Plan project are listed below.

- Goal 1.J:** To encourage commercial mining operations within areas designated for such extraction, where environmental, aesthetic, and adjacent land use compatibility impacts can be adequately mitigated.
- I.J.3 The County shall discourage the development of any uses that would be incompatible with adjacent mining operations or would restrict future extraction of significant mineral resources.
- Goal 1.K:** To protect the visual and scenic resources of Placer County as important quality-of-life amenities for county residents and a principal asset in the promotion of recreation and tourism.
- 1.K.4 The County shall require that new development incorporates sound soil conservation practices and minimizes land alterations. Land alterations should comply with the following guidelines:
- a. Limit cuts and fills;
 - b. Limit grading to the smallest practical area of land;
 - c. Limit land exposure to the shortest practical amount of time;
 - d. Replant graded areas to ensure establishment of plant cover before the next rainy season; and
 - e. Create grading contours that blend with the natural contours on site or with contours on property immediately adjacent to the area of development.
- Goal 8.A:** To minimize the loss of life, injury, and property damage due to seismic and geological hazards.
- 8.A.1 The County shall require the preparation of a soils engineering and geologic-seismic analysis prior to permitting development in areas prone to geological or seismic hazards (i.e., groundshaking, landslides, liquefaction, critically expansive soils, avalanche.)
- 8.A.2 The County shall require submission of a preliminary soils report, prepared by a registered civil engineer and based upon adequate test borings, for every major subdivision and for each individual lot where critically expansive soils

exist, unless suitable mitigation measures are incorporated to prevent the potential risks of these conditions.

- 8.A.3 The County shall prohibit the placement of habitable structures or individual sewage disposal systems on or in critically expansive soils unless suitable mitigation measures are incorporate to prevent the potential risks of these conditions.
- 8.A.4 The County shall ensure that areas of slope instability are adequately investigated and that any development in these areas incorporates appropriate design provisions to prevent landsliding.

State and Federal Regulations

State and federal permits related to disturbance of soils and impacts on the site's geology, which may be required for the proposed project, include:

- U.S. Army Corps of Engineers Nationwide Permit 12;
- California Department of Fish and Game Streambed Alteration Agreement; and
- SWRCB General Construction Activity Storm Water Permit.

10.3 IMPACTS

Significance Criteria

Project impacts may be considered significant if construction results in geologic hazards which could expose the public to additional health and safety risks. Significance criteria are provided by Appendix G of the CEQA Guidelines and by policies contained in the *Placer County General Plan* and the *Auburn/Bowman Community Plan*. A significant geologic impact would result if the proposed project could:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault,
 - Strong seismic ground shaking,
 - Seismic-related ground failure, including liquefaction, and/or
 - Landslides;
- Result in substantial soil erosion or the loss of topsoil;
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse;
- Be located on expansive soil, as defined in *Table 18-1-B* of the Uniform Building Code (1997), creating substantial risks to life or property;

- Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water; or
- Result in significant alterations to existing landforms.

Project Impacts

Impacts Determined to be Less than Significant

Exposure of People or Structures to Risks Associated with Seismic Activity. Although no faults capable of ground rupture have been identified at the project area, DeWitt Center is located within the Foothills Fault System, which has low to moderate seismic activity. This system has been characterized as having the potential to produce maximum earthquakes of Richter magnitude 6.5. In addition, the project area is within the vicinity of the DeWitt Fault, however, this fault is not an Alquist-Priolo mapped fault based on its lack of activity in recent periods. As in all areas of California, development of the project could potentially result in exposure of people and property to the hazards of ground shaking and surface rupture associated with earthquake activity. All new structures constructed throughout the project area will conform to Placer County standards and the Uniform Building Code (UBC). Adherence to these standards would ensure that buildings at DeWitt Center would be constructed to withstand anticipated seismic activities, thereby reducing the risk of personal injury or property damage. Impacts from seismic hazards are considered less than significant when UBC standards are met.

Seismic and other geologic forces can also contribute to risks of exposure to volcanic activity and ocean effects, such as tsunamis (seismically-generated sea waves). The project area is geographically removed from these risks. The nearest known active volcanic center is Mt. Lassen, approximately 95 miles north of the area, and the Pacific Ocean is more than 100 miles to the west. The project area is not at risk to exposure to these types of geologic hazards.

Due to the fact that site surface soil is generally relatively thin and unsaturated, and is underlain at shallow depths by dense, metavolcanic rock, there is a low potential for liquefaction and lateral spreading within the project sites (Holdrege & Kull 2002a and 2002b). The project area is relatively flat; therefore landslides are not a potential risk at the proposed construction or demolition sites. Slopes in the project vicinity are no more than 30 percent, and generally range between two and fifteen percent. Elevations across the project area range from 1,375 to 1,435 feet above sea level.

Stability of Geologic Unit and Soil. Holdrege & Kull did not observe any subsurface seepage during trench excavation at the LDB and AJC sites. However, they anticipate that seepage will be encountered near the surface soil/metamorphic rock during and after the rainy season. Additionally, they expect that into the summer months, the groundwater level may be perched on rock in relatively level or gently sloping areas. In the AJC site, wet soil conditions are expected in the region of the drainage that bisects the site.

Impacts from placing buildings or roads in areas with unstable soils would be largely avoided by ensuring compliance with standard grading, soil conditioning, and building practices. This will avoid exposure of people and structures to hazards related to expansive and unstable soils, seepage, or liquefaction. Extraction of groundwater, oil, or gas from the subsurface of the

project site is not proposed; therefore, subsidence, or settling of the land surface, is not expected to occur. As discussed above, slope instability impacts, including landslides and mudflows, are considered to be a less than significant risk due to the lack of steep slopes in the project area. According to the rough grading plans for the LDB and AJC, proposed maximum slopes after grading at each site are between two and four percent. These slopes are necessary to direct stormwater drainage from the parking lots. No retaining walls are proposed for either the LDB or the AJC. The proposed slopes for the LDB and AJC are considered to have less than significant impacts with respect to slope stability.

Ability of Soils to Support Septic Systems. The new buildings proposed for construction in the DeWitt Government Center Facility Plan will all be served by the Placer County Sewer Maintenance District #1, as discussed in **CHAPTER 13, PUBLIC SERVICES**. No septic tanks or alternative wastewater disposal systems are proposed, therefore there is no impact with respect to the ability of project area soils to support such systems.

Potentially Significant Impacts

Impact 10.1: Soil Erosion and Loss of Topsoil

Significance Before Mitigation:	Significant
Mitigation:	10.1a through 10.1h
Significance After Mitigation:	Less than Significant

Development of the proposed project would require grading for the construction of building pads, parking lots, and utility service lines. The removal of vegetative cover and earth moving resulting from site preparation activities would disturb topsoil and expose it to increased risks of erosion from wind and water. Rain and water runoff could erode the exposed soils, transporting sediments into the project area's drainageways and potentially degrading aquatic ecosystems. Implementation of *Mitigation Measures 10.1a through 10.1f* will minimize the impacts related to erosion and siltation to less than significant levels and will preserve study area soils to the extent feasible.

Demolition is anticipated to strip all vegetation, building pads, and paving from the demolition sites. *Mitigation Measure 10.1c* provides standards for reestablishment of vegetation and ground covers in these sites. Wind erosion impacts on air quality due to windborne dust particles are discussed in **CHAPTER 7, AIR QUALITY**.

The rough grading plans for the AJC include the establishment of cut and fill banks along the perimeter of the site. The cut bank is expected to range approximately between one and ten feet in height and between one and 25 feet in width. The fill bank along the western site boundary is also expected to range between one and ten feet in height and between one and 20 feet in width. Preliminary grading plans will be submitted to the Department of Public Works for review and approval prior to issuance of grading permits. This review will ensure that slopes for cut and fill areas will not exceed allowable limits. With implementation of *Mitigation Measure 10.1e*, which provides for revegetation of the exposed slopes, the creation of these cut and fill banks is expected to have less than significant impacts with respect to soil erosion.

Impact 10.2: Creation of Substantial Risks to Life or Property Related to Expansive Soils

Significance Before Mitigation:	Significant
Mitigation:	10.2a through 10.2d
Significance After Mitigation:	Less than Significant

Exploratory trenches excavated during the geotechnical studies of the proposed LDB site found areas of expansive soils. *Mitigation Measures 10.2a through 10.2d* provide site preparation standards that will avoid or minimize any hazards related to the expansive soils. Although expansive soil was not observed at the AJC site, this soil type may exist there given the presence of expansive soil in the surrounding area and large amounts of stockpiled soil onsite. Moreover, the existing fill and stockpiled soil was generally loose and incapable of supporting the proposed AJC development (Holdrege & Kull 2002b). Compliance with mitigation measures will ensure that the fill and stockpiled soil is removed, processed, and replaced properly in order to provide suitable use as fill for the proposed development.

Impact 10.3: Alteration of Existing Landforms

Significance Before Mitigation:	Significant
Mitigation:	10.3a through 10.3e
Significance After Mitigation:	Less than Significant

As discussed above, DeWitt Center is relatively flat, with very little topographic variation. Elevations onsite range between 1,375 and 1,435 feet above sea level. Existing slopes at the LDB site range between zero and two percent, while existing slopes at the AJC site range between zero and eight percent, with the steepest slopes associated with the wetland swale that passes through the southern portion of the site. The alteration of site topography is an unavoidable result of development. Grading of building pads and parking lots, and trenching for utility services can result in significant changes to the topography of the project area.

According to the rough grading plans for the LDB, proposed maximum slopes after grading are between two and four percent. These slopes would be located in the parking area south of the building and would function to direct most stormwater drainage toward the southwest corner of the LDB site. The LDB grading plans also provide for creation of a detention pond system, consisting of two separate ponds with a depth of four feet, connected by an 18-inch diameter pipe, in the northwest corner of the site to accommodate stormwater drainage from the northern portion of the LDB site, and for preservation of a small hill in the northeast corner of the site, which would be landscaped with a combination of ground covers and trees. At this site, it is anticipated that grading will include scarification and recompaction of near surface soil, but relatively minor cuts and fills. Maximum cut depths are expected to be 30 inches, with the exception of five-foot deep trenches for utility lines and four-foot deep detention ponds. Fills onsite are expected to reach 30 inches. A total of 5,000 cubic yards of soil is expected to be moved onsite, with cut and fill amounts balancing. The existing landforms at the LDB site will not be altered significantly.

Rough grading plans for the AJC indicate that the maximum proposed slopes within the parking and building areas are between three and four percent, while slopes on the cut and fill banks are a maximum ratio of 1:2. Maximum cuts and fills at the AJC site are expected to be ten

feet, with the majority of cuts and fills being between zero and five feet. It is anticipated that $\pm 12,500$ cubic yards of soil will be moved on the site and that cut and fill amounts will balance. Additionally, the AJC grading plans incorporate a vegetated berm along the eastern side of the AJC building, a cut bank around the eastern side of the southern parking lot, and a fill bank along the western boundary of the Ancillary Building. These features will provide topographic relief on the site, thus lessening impacts from project development. The AJC site is currently relatively flat, and characterized by a high level of previous disturbance. The creation of the berms and cut and fill banks will create a potentially significant alteration of existing landforms.

The proposed project includes expansion of the DeWitt Center Detention Basin, located west of the Main Jail, to accommodate the additional stormwater runoff that would result from the increases in impervious surfaces at the LDB and AJC sites. The grading associated with this expansion is expected to occur concurrent with the grading at the AJC site. The detention basin is proposed to be expanded by approximately 80,000 cubic feet. This cut soil would be deposited throughout DeWitt Center, in part as fill for permitted fills of wetlands, as discussed in **CHAPTER 9, BIOLOGICAL RESOURCES**, and in part as fill/topsoil for the proposed demolition sites. Identification of fill amounts and placement for the soil removed from the detention basin site would be included on the grading plans for the detention basin work which would be submitted to the Department of Public Works for review and approval prior to issuance of a grading permit, as required by *Mitigation Measure 10.3d*.

Cut for utility trenches for both the LDB and AJC will be a maximum of five feet deep. It is anticipated that utility trenches for the CES and WC projects will also be a maximum of five feet deep. This will be evaluated in subsequent project-level environmental review for those facilities. No retaining walls are proposed for either the LDB or the AJC. Retaining walls are not anticipated to be necessary for the CES and WC projects. This will also be evaluated in subsequent review.

Additional grading will occur within the proposed locations of the CES and WC, along right-of-ways for utility improvements (i.e., sewer and water lines), and along the open water pond in the southwest corner of DeWitt Center for construction of the riparian wetland (discussed in the **CHAPTER 9, BIOLOGICAL RESOURCES**). Site-specific geotechnical analyses will be prepared for the CES and WC projects and will be evaluated in subsequent project-level environmental review documents for those sites.

10.4 MITIGATION MEASURES

Soil Erosion and Loss of Topsoil

Mitigation Measure 10.1a: All proposed grading, drainage improvements, erosion control measures, and removal of vegetation and trees shall be shown on the Grading Plans for each project site (construction and demolition sites) and all work shall conform to provisions of the Placer County Grading Ordinance (Section 15.48, Placer County Code) and the Placer County Flood Control District's Stormwater Management Manual. No grading, clearing, or tree disturbance shall occur until the Grading Plans are approved by the Placer County Department of Public Works and grading permits have been issued. Separate Grading Plans shall be submitted and separate grading permits issued, for each project phase that involves earth work, including

demolition and construction at the Land Development Building site, construction at the Auburn Justice Center site, demolition at other proposed demolition areas (wastewater treatment plant; Buildings 204B, 205B, 206B, and 207A&B; and Buildings 212A&B through 217A&B), rough grading and provision of infrastructure at the Children's Emergency Shelter and Women's Center sites, and implementation of applicable Mitigation Measures (such as *Mitigation Measure 9.3a*, which requires creation of wetland habitat onsite.)

Mitigation Measure 10.1b: A geotechnical engineering report shall be prepared for each project phase that involves earthwork, as defined in *Mitigation Measure 10.1a*. Each geotechnical report shall be submitted to the Department of Public Works for review and approval concurrent with submittal of the Grading Plans as required in *Mitigation Measure 10.1a*.

Mitigation Measure 10.1c: Should onsite conditions vary substantially from the conditions anticipated based on the geotechnical engineering report and approved grading plans, site grading shall halt until a qualified geologist/engineer can assess site conditions and recommend appropriate changes to the approved grading plans. A revised grading plan shall be submitted to the Placer County Department of Public Works for approval.

Mitigation Measure 10.1d: Implement *Mitigation Measure 5.2a*, which requires revegetation and/or covering of demolition sites to minimize erosion. Final landscaping plans shall include revegetation and/or covering of these areas, while final grading plans shall include erosion control measures.

Mitigation Measure 10.1e: Implement *Mitigation Measure 7.1a*, which requires the submittal of a Construction Emission/Dust and Erosion Control Plan that includes specific Best Management Practices.

Mitigation Measure 10.1f: Implement *Mitigation Measure 9.3c*, which requires additional Best Management Practices to control erosion and sedimentation of onsite drainageways.

Mitigation Measure 10.1g: Implement the following additional Best Management Practices to minimize impacts to soils in the DeWitt Center Study Area:

- a) Maintain 50-foot setbacks for construction and grading activities from intermittent streams, riparian areas, and wetlands.
- b) Prepare a winterization plan for sites where construction is not completed by October 15.
- c) Minimize the depths of cuts and fills to the extent feasible.
- d) For surfaces at any project site that are not revegetated or covered, the County will employ other suitable BMPs, such as filter strips or vegetated swales, as necessary to minimize discharge of sediments offsite.

Creation of Substantial Risks to Life or Property Related to Expansive Soils

Mitigation Measure 10.2a: Fine grained, potentially expansive soil that is encountered during grading within proposed building locations and paved areas shall be mixed with granular soil or over-excavated and stockpiled for removal from the project site or for later use in landscape areas.

Mitigation Measure 10.2b: Soil preparation for fill placement, as well as fill placement and depth shall be conducted in accordance with the standards outlined in the *Geotechnical Reports* (2002) prepared by Holdrege & Kull for the Land Development Building and Auburn Justice Center sites or subsequent studies used (if any) for review of the grading plans for each project site. These reports are included in Appendix E of this EIR.

Mitigation Measure 10.2c: Consistent with the applicable code(s) and the recommendations of the geotechnical reports, a qualified technical personnel from the geotechnical consultant shall be present during grading of the proposed Auburn Justice Center site to determine the lateral and vertical extent of the existing fill and stockpiled soil.

Mitigation Measure 10.2d: Construction dewatering, subsurface drainage, and surface water drainage shall be performed in accordance to the standards highlighted in the *Geotechnical Reports* (2002) prepared by Holdrege & Kull for the Land Development Building and Auburn Justice Center sites. These standards can be found in Appendix E of this EIR.

Alteration of Existing Landforms

Mitigation Measure 10.3a: Implement *Mitigation Measure 10.1a*, which requires indication on Grading Plans of the extent of grading, drainage improvements, and vegetation removal.

Mitigation Measure 10.3b: The County's contractor shall implement sensitive grading techniques to blend landform alterations with the natural setting. These techniques include limiting grading areas, use of protective fencing around the dripline of oak trees (as stipulated in *Mitigation Measures 5.1b* and *9.1b*), blending cut and fill slopes into the natural terrain, rounding and feathering graded slopes into existing terrain to avoid an artificially contoured appearance, planting or otherwise protecting re-contoured slopes from the effects of water runoff and wind erosion within 90 days of completion of grading, and setting street elevations as close to the existing natural grade as possible.

Mitigation Measure 10.3c: If blasting is required for site grading or the installation of site improvements, the County will comply with applicable County ordinances and the Occupational Safety and Health Administration requirements that relate to blasting and use only State licensed contractors to conduct these operations.

Mitigation Measure 10.3d: Prior to issuance of a Grading Permit to allow for the earthwork associated with expansion of the DeWitt Center Detention Basin, the County will submit Grading Plans and Landscaping Plans to the Department of Public Works for

approval. The grading plans will include prescriptive practices for placement of all of the soil removed from the detention basin. Should the County propose to store or stockpile any of the excavated soil elsewhere within DeWitt Center, the grading plans shall indicate specific details of the location and configuration of the stockpile adequate to ensure that no additional impacts related to soil erosion or alteration of area hydrologic patterns will occur.

Mitigation Measure 10.3e: Prior to issuance of an Early Grading Permit to allow for onsite rough grading at the Land Development Building and Auburn Justice Center sites, the County will submit Improvement Plans, Rough Grading Plans, and preliminary Final Grading Plans, and any related documents as required, to the Department of Public Works for approval.

CHAPTER 11

HYDROLOGY AND WATER QUALITY

CHAPTER 11 HYDROLOGY AND WATER QUALITY

11.1 SETTING

Regional Surface Water Features

DeWitt Center is located within the Sacramento River Basin, which is bound by the Sierra Nevada Mountains to the east, the Coast Ranges to the west, the Cascade Range and Trinity Mountains to the north, and the Delta-Central Sierra area to the south. The Sacramento River is the principal stream in the basin. Its major tributaries are the Pit and McCloud rivers, which join the Sacramento River from the north, and the Feather and American rivers, which are tributaries from the east.

The DeWitt Center Study Area comprises 180 acres, located between Atwood and Bell Roads approximately one-half mile west of State Route (SR) 49. The site is located on a ridge at elevation 1,400 feet above mean sea level. The project area is shown in *Figure 2-1* in **CHAPTER 2, PROJECT DESCRIPTION**. The northeasterly 33-acre portion of the DeWitt Center Study Area drains toward SR 49 into the Rock Creek watershed, and the remaining 146.7 acres drain toward Atwood Road into the North Ravine watershed, as shown on *Figure 11-1*. All storm water that flows from the site ultimately flows into the Sacramento River (Planning Concepts 1996).

The Rock Creek watershed is within the Dry Creek watershed, north of the project area. (Please note that a creek in western Placer County is also named Dry Creek. That creek is not associated with the Dry Creek that occurs north of DeWitt Center.) Rock Creek, a major tributary to Dry Creek, flows from east to west and drains an area of approximately 4.3 square miles. Dry Creek has a drainage area of 15.5 square miles above the confluence with Orr Creek. Rock Creek Lake is located to the northeast of DeWitt Center, and is used primarily for storing water and diverting it to the Wise Canal, which is owned by Pacific Gas and Electric Company (PG&E) (Montgomery 1992a).

Auburn Ravine is a perennial stream originating just west of the City of Auburn, approximately 10 miles east of the project area. North Ravine originates approximately one-half mile south of DeWitt and is a tributary to Auburn Ravine that drains the eastern portion of the Auburn Ravine watershed. North Ravine generally flows from north to south, and drains an area of 4.6 square miles above its confluence with Auburn Ravine. The Auburn Ravine drains an area of 10.8 square miles below the confluence with North Ravine. The total drainage area of Auburn Ravine is 79 square miles. Flows are seasonal and variable. Diversions from the Nevada Irrigation District (NID) and PG&E, and discharges from the City of Auburn wastewater treatment plant, contribute to flows in the summer, when the creek would otherwise be dry under average to drought conditions (De Wante and Stowell/QUAD 1992). Auburn Ravine ultimately flows into the East Side Canal, which, in turn, empties into the Cross Canal approximately one mile east of SR 99. The Cross Canal empties into the Sacramento River approximately 10 miles north of Sacramento and about one mile below the confluence of the Feather River and the Sacramento River (Montgomery 1992a).

Historical streamflow data are not available for Rock Creek or North Ravine. For Auburn Ravine, the City of Auburn conducted a hydrologic analysis as part of the *Environmental Impact Report* (EIR) for the Auburn Wastewater Facility Plan (City of Auburn 1997, as cited in Eco:Logic

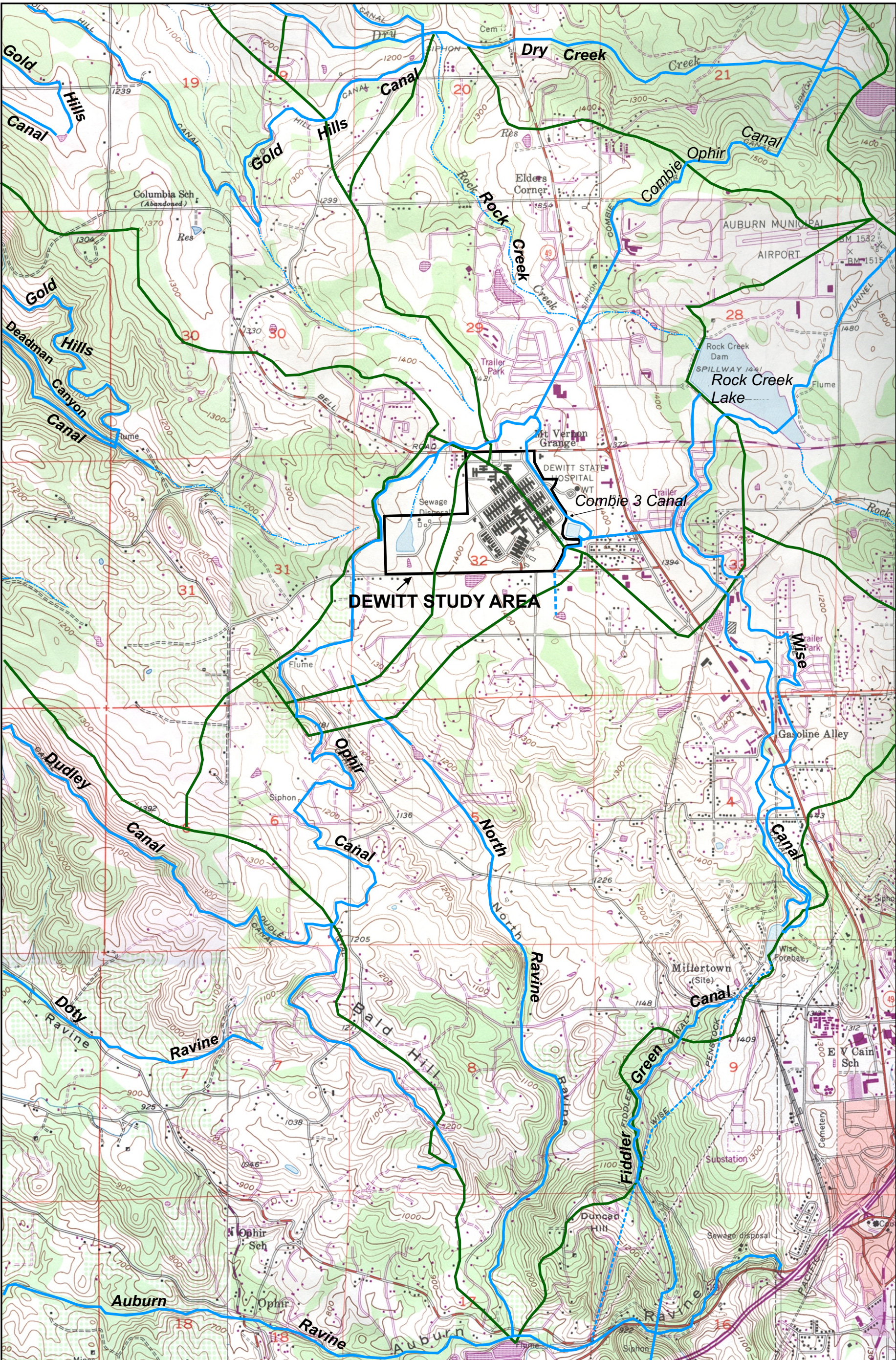
Engineering, Inc. 1999). In that analysis, natural flows for Auburn Ravine were estimated from natural streamflow data for Deer Creek, a tributary of the Cosumnes River located south of Auburn Ravine. The estimated natural mean monthly streamflows for Auburn Ravine near SR 65 in Lincoln vary from a high of 70.6 cubic feet per second (cfs) in January to no flow in August and September (City of Lincoln et al., 1998). However, flows in Auburn Ravine are influenced by several upstream agencies. Based on regulated streamflow data from the NID's gauge in Auburn Ravine below SR 65 for the period 1985 through 1997, average regulated streamflows vary from 117 cfs in January to 30 cfs in October (City of Lincoln et al. 1998).

An extensive network of canals and reservoirs supplies surface water for domestic use throughout the surrounding area, to the City of Auburn, and also to the residential and agricultural regions of the County to the south and west of DeWitt Center. The canals are owned and operated by three different agencies: PG&E, Placer County Water Agency (PCWA), and NID. The source of the water for most of the canals is the Bear River and Lake Combie north of the DeWitt Center Study Area. The canals are primarily open rather than encased, allowing the inflow of runoff and surface water. In general, most of the canals transport the water from north to south, with many side diversions and spills. Some of the canals are used solely for water supply purposes (municipal and agricultural), whereas others are also used for power generation (Placer County 1994).

The primary canal operated by NID in the vicinity of the project area is the Combie-Ophir Canal. This canal is used exclusively for water supply (agriculture and domestic) and is not encased except for a short portion (approximately 900 feet along Bell Road, just north of the area). It originates at Lake Combie located on the Bear River approximately six miles northeast of the area. The canal generally runs from north to south. Normal flow capacity of this canal is approximately 40 cfs (Montgomery 1992a).

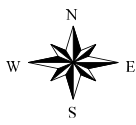
The Combie-Ophir Canal provides water to the Combie 3 Canal, which runs from north to south adjacent to the eastern edge of the DeWitt Center Study Area. This canal is frequently referred to as the Ophir Canal or the Kemper Canal. Based on personal communications with NID, this EIR refers to the canal as Combie 3 (pers. comm. Smith). The flow in the Combie 3 Canal is supplemented in the summer months with water from the Fiddler Green Canal, which runs parallel to PG&E's Wise Canal. The Combie 3 Canal runs south to Atwood Road, where it passes through a buried pipe that runs south under Atwood Road and then through the neighborhoods located south of DeWitt Center. Farther south, at the intersection of Bean and Kemper roads, the canal is no longer enclosed. The water from the Combie 3 Canal is used for irrigation purposes south of Atwood Road (Curry 2002). NID also releases water from the Combie-Ophir Canal to a tributary of Orr Creek; this water is later diverted to Gold Hill Canal via a small reservoir on Orr Creek (Placer County 1994).

PCWA also operates and maintains canals in the vicinity of the site. The Fiddler Green Canal extends from north to south and is located west and southeast of the site. As with the NID canals, this canal is operated solely for water supply purposes, and only small portions of it have been encased (Placer County 1994).



- Watershed Boundary
- Creeks, Canals

0 1000 2000
Approximate scale in feet



Basemaps: Auburn and Gold Hill, CA
USGS 7.5 minute
topographic quadrangles

Figure 11-1

REGIONAL HYDROLOGIC SETTING

DeWitt Government Center
Facility Plan (2003 - 2010)
Placer County, California

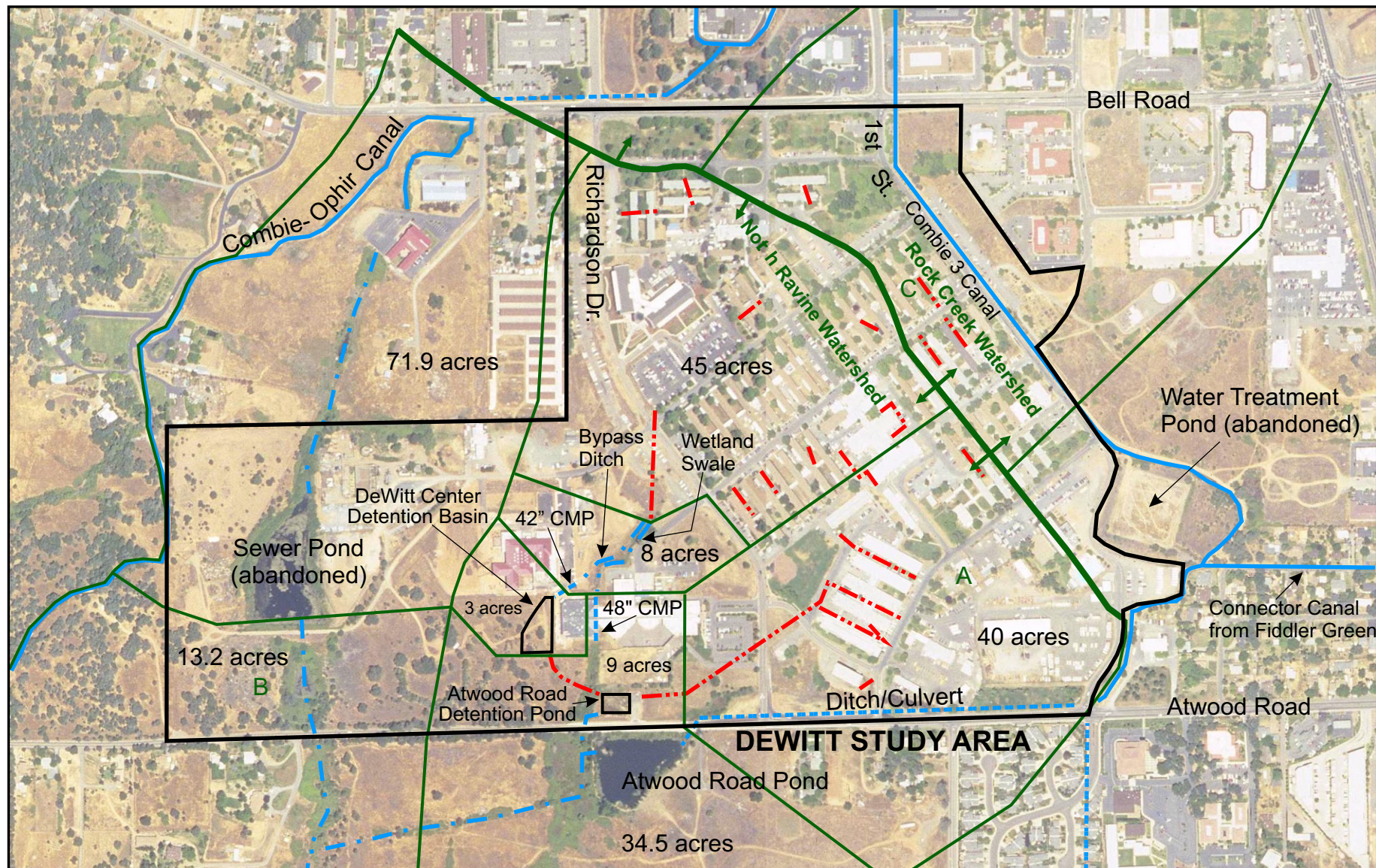
PG&E operates and maintains canals in the vicinity of the site primarily for the purpose of water supply and power generation. One of these canals is the Wise Canal, which carries water from north to south. The Wise Canal is the largest canal in the study area (with a capacity of more than 500 cfs) and is not encased except in short segments where the water is diverted into penstocks (Placer County 1994). The Wise Canal receives water from the Bear River Canal, which releases water to Halsey Forebay. This water is then released via a penstock to Halsey Powerhouse and Halsey Afterbay (located on upper Dry Creek). The water is then diverted from the Afterbay to the Wise Canal. This segment of the canal transports water from the upper Dry Creek watershed to the Rock Creek watershed, where the water is released into Rock Creek Lake. Water is then diverted from Rock Creek Lake into a lower section of Wise Canal passing into the Auburn Ravine watershed, and ending up in the Wise Forebay. At the Wise Forebay, the canal water enters into a penstock and is carried to Wise Powerhouse located along the Auburn Ravine. From here, canal water is released both to Auburn Ravine and South Canal (Placer County 1994).






The Wise Canal differs from other smaller water supply canals in the vicinity of the site in that it has no spill points except for those into reservoirs. An emergency spillway for the canal is located at the Wise Forebay and would spill to a small tributary of the North Ravine. However, this is designed to be used only in the event of penstock failure and has not been used to date (Placer County 1994).

Site-Specific Surface Water Features

Figure 11-2 shows surface water features at DeWitt Center. In general, surface ditches and swales convey most of the storm water runoff from the site, with some culverts at street crossings. Several old storm drainpipes were constructed in the 1940s as part of the original hospital construction; these are located in the southern portion of the Study Area. This old system consists primarily of 8-inch clay drainpipes connected to catch basins. Only limited detailed topographic information is available for the Study Area, and none is available for the areas where these old storm drains are located; therefore, the areas contributing runoff to each drain inlet are unknown. The system would be expected to intercept runoff from the immediate vicinity and as bound by nearby buildings and/or roads. The flow capacity of this old system is unknown, but due to its age, it would be expected to be under-designed with respect to current design requirements.

In recent years, storm water improvements have been implemented in the Study Area in conjunction with specific projects, such as the Main Jail Expansion, Juvenile Hall, and Finance Administration Building projects. These improvements include a detention basin between the jail and Atwood Road constructed in 1996 (herein referred to as Atwood Road Detention Pond), and a basin at the southwest corner of the Main Jail constructed in 2001 (herein referred to as DeWitt Center Detention Basin). Additional storm water drains have been installed in the vicinity of the Juvenile Hall and the Finance Administration Building to convey runoff to the basins and from the detention basins to culverts under Atwood Road. Other storm drain systems installed in recent years include: (1) a storm drain system that drains the Finance Administration Building and parking lot site located at the northeast corner of Richardson Drive and "B" Avenue, and (2) a drain system in First Street that drains to the east of the Study Area, with a portion of this system passing under the Combie 3 Canal. Runoff that exceeds the capacity of this system sheetflows into the canal (Planning Concepts 1996).



-  Canal
-  Buried Pipe
-  Creek or Ditch
-  Storm Drain
-  Subareas Boundaries

0 600
Approximate scale in feet



Aerial Photo Provided by
Geoimagery
Photo Date: June 1999

Watershed boundaries and subarea acreage from Planning Concepts, 1996 and NFA, 2001

Figure 11-2

SITE HYDROLOGY

*DeWitt Government Center
Facility Plan (2003 - 2010)
Placer County, California*

As part of the Main Jail expansion project, storm water improvements included creation of the DeWitt Center Detention Basin. The purpose of this basin is to accommodate increases in stormwater runoff due to an increase in impervious areas as a result of the Main Jail expansion. This basin, which is located approximately 40 feet west of the Main Jail, has a storage capacity of 0.69 acre-feet and was designed to expand to accommodate runoff from the future development at DeWitt Center. This basin receives storm water runoff from a 45-acre area northwest of the Main Jail that is conveyed to the basin via a ditch and 42-inch-diameter culvert. Direct runoff from a 3-acre area adjacent to the basin is also collected in the basin. The basin's outlet pipe is currently a 12-inch diameter polyvinyl chloride (PVC) pipe that conveys the discharge to the culverts under Atwood Road, which also drain the existing Atwood Road Detention Pond.

The Atwood Road Detention Pond is located north of Atwood Road, west of the Main Jail entrance, and south of the Main Jail. This pond was constructed in 1996 to accommodate increases in stormwater runoff due to construction of the Finance Administration Building and Juvenile Hall. A 48-inch culvert that passes under the Main Jail conveys stormwater runoff from an 8-acre area north of the Main Jail into the Atwood Road Detention Pond, as indicated on *Figure 11-2*. As part of the plans for the Main Jail expansion project, this pond was to be enlarged. However, this pond was subsequently determined to be a wetland under the jurisdiction of the U.S. Army Corps of Engineers and will no longer be expanded.

The Atwood Road Detention Pond also receives stormwater runoff from the 9 acres immediately adjacent to the pond, as shown on *Figure 11-2*. The total area contributing runoff into this pond is 67 acres. The pond provides 1.21 acre-feet of storage at elevation 1,390.7 feet, which is the elevation at which Atwood Road begins to be overtopped. Discharge from the pond is conveyed by a 30-inch corrugated steel culvert that passes under Atwood Road and then flows southwest towards North Ravine via a natural drainage.

An abandoned sewer pond is located in the western portion of DeWitt Center. A dam constructed across a natural swale created the pond. The dam crest is at elevation 1,385.0 feet. This pond is maintained in a "full" condition by constant in-flow from NID's Combie-Ophir Canal (AR Associates 1995). The pond has a 2.3-acre surface area at a fixed water surface elevation of approximately 1,378.1 feet (Planning Concepts 1996). Approximately 10 acre-feet of storage is available between elevations 1,378 and 1,382 feet. The outlet structure is an approximately 4-foot-square concrete box with an outlet pipe at the bottom, which passes beneath the dam. A small pond exists south of this outlet pipe. Overflow from the abandoned sewer pond flows into this smaller pond, which outflows through a culvert under Atwood Road. Drainage from these ponds then flows south towards North Ravine (Planning Concepts 1996).

An abandoned water treatment pond (or square pond), which was historically used to store water for the abandoned DeWitt Center Water Treatment Plant, is located near the southeast corner of DeWitt Center, adjacent to the eastern Study Area boundary. Storage capacity provided by this pond was approximately 3.5 million gallons. This pond formerly received water from the Combie 3 Canal but is no longer in use.

A ditch/culvert system runs along the southern edge of the Study Area boundary adjacent to Atwood Road. This ditch/culvert system conveys stormwater runoff from the area, beginning

west of the First Street entrance. Between the Richardson Road and Main Jail entrances, the drainage is conveyed under Atwood Road to a ± 2 acre open water pond south of Atwood Road. This pond is herein referred to as Atwood Pond. This pond has an overflow weir on its western edge, such that overflow will be discharged into the same natural drainage that the DeWitt Center Detention Basin and Atwood Road Detention Pond discharge into.

Atwood Pond is privately owned and maintained. This pond was originally a recreational pool for DeWitt Center. The pond receives storm water runoff from approximately 44 acres of the project area via a ditch that runs along Atwood Road and then through a 24-inch corrugated steel culvert that runs under Atwood Road just east of the pond. In addition, 7.5 acres located on the south side of Atwood Road drain into the pond via a roadside ditch (Planning Concepts 1996).

A large portion of the DeWitt Center Study Area is covered with impervious surfaces, i.e., pavement, buildings, and sidewalks (Planning Concepts 1996). Site soils are of the Auburn Complex and fall into Hydrologic Soils Group C/D. These soils exhibit low to medium permeability rates. Site slopes range between 1 and 10 percent. Most of the undeveloped land lies in the southwestern portion of the site around the Main Jail facility and onsite abandoned sewer pond.

Regional Flooding

Regional and local floods occur from October through April. The floods are generally caused by a combination of prolonged rainfall leading to soil saturation and a short period of intense precipitation associated with frontal convection or severe thunderstorms.

The Placer County Flood Control and Water Conservation District has sponsored three studies that reviewed the areas drained by the Auburn Ravine, Coon and Pleasant Grove creeks, and the Dry Creek located in western Placer County. These creeks and their tributaries flow through and drain western Placer County, southeastern Sutter County, and portions of Sacramento County. The studies are:

- Auburn Ravine, Coon, and Pleasant Grove Creeks Flood Mitigation, Volumes 1 and 2 (CH2M Hill, 1993);
- Placer/Sutter County Joint Flood Study, Auburn Ravine, Coon and Pleasant Grove Creeks (CH2M Hill, 1994); and
- The Placer County Flood Control and Water Conservation District and Sacramento County Water Agency Final Report, Dry Creek Watershed Flood Control Plan (James M. Montgomery, 1992b).

These studies were prepared to respond to the concern over potential increases in flooding and to develop potential mitigation for impacts associated with development.

Planned land uses within Placer County allow for industrial, commercial, and residential development that would normally increase flood flows and volumes. An extensive area upstream of the Cross Canal, in eastern Sutter County and western Placer County, has a history of periodically flooding, as does the western Placer County Dry Creek through and downstream of the City of Roseville.

While development can have large impacts on peak flows and volumes, hydrologic modeling of the watershed indicated that “existing” upstream development in the Auburn Ravine/Pleasant Grove Creek watersheds could result in approximately one-half inch increase in flooding depth in the lower (western) watershed during the 100-year flood and that existing flooding problems in the western portion of the watershed would not be significantly reduced, even if all existing development could be removed from the watershed (CH2M Hill 1993).

Land use projections based on General and Specific Plans in Placer County show that approximately 10 percent of the area developing in the future would have impervious surfaces. Based upon HEC-1 modeling, the CH2M Hill analysis determined that the change in watershed land use from existing conditions to future conditions would result in an approximately 0.12-foot increase in flood stage upstream of the Cross Canal during the 24-hour 100-year storm. The corresponding increase for the 8-day 100-year storm would be approximately 0.08 foot.

In support of the *Auburn/Bowman Community Plan Environmental Impact Report* (Planning Concepts 1994), James M. Montgomery conducted a drainage study of the region to provide Placer County with information on existing and future flood and water quality issues. The flood of February 1986 caused the most severe flooding damage to date in the region. Most of the flooding problems were due to inadequate bridges and culverts, which resulted in overtopping of these structures. However, at several locations in the Community Plan area, flooding of structures did occur in the floodplains. The *Auburn/Bowman Community Plan Environmental Impact Report* provides a summary of the known existing problem areas due to flooding. The problem areas identified for the Rock Creek and North Ravine watersheds include:

North Ravine

- Vada Ranch Road at North Ravine
- Calnick Lane at North Ravine
- Warren Way at North Ravine
- Millertown Road at North Ravine
- Mt. Vernon Road at North Ravine
- Harris Road at North Ravine
- Vista Road at North Ravine
- Kemper Road at North Ravine
- Millertown Road at North Ravine Tributary
- Mt. Vernon Road at North Ravine Tributary
- Bar Ranch Road at North Ravine Tributary

Rock Creek Watershed

- Sherwood Way at Rock Creek
- Highway 49 Bridge at Rock Creek
- Joeger Road and Rock Creek
- Richardson Drive at Rock Creek
- Rock Creek Road at Rock Creek
- New Airport Road at Rock Creek
- New Airport Road at Rock Creek Tributary

AR Associates conducted a drainage study for the Main Jail expansion project (NFA 2001). With creation of the 0.69 acre-foot DeWitt Center Detention Basin described above, the study indicated that post-project flows would be the same as or below pre-project flows. The estimated peak flows are summarized in Table 11.1. However, despite the reduced flows, the study indicates that Atwood Road, with an elevation of 1,390.7 feet, will be overtopped during a 100-year flood event. As shown on Table 11.1, the estimated water surface elevation at Atwood Road is 1,390.95 feet with the 0.55 acre-foot basin, or approximately 0.25 feet above the road elevation.

Table 11.1
Estimated Peak Flows and 100-Year Maximum Water
Surface Elevation at Atwood Road Detention Pond
(Jail Expansion Project)

	2-Year Peak Flow (cfs)	10-Year Peak Flow (cfs)	25-Year Peak Flow (cfs)	100-Year Peak Flow (cfs)	100-Year Maximum Water Surface Elevation (feet)
Pre-Jail/House 4 Expansion Project	29	46	54	105	1,391.01
Current ¹	28	46	53	98	1,390.95

Notes:

1 The current conditions shown in the table represent the conditions after the Jail Expansion project (i.e., Housing Unit 4) has been completed. This corresponds to the "temporary pond" conditions presented in the drainage study.

Source: North Fork Associates, 2001

DeWitt Center is not located within the 100-year flood plain. However, peak flow conditions currently result in flooding at Atwood Road. The site does not lie within nor will it affect a sole source aquifer recharge area as designated by the U.S. Environmental Protection Agency (NFA 2001).

Surface Water Quality

The water quality in all nearby streams is of concern for wildlife and fisheries as well as for other downstream uses. Stormwater runoff from rural and urban areas may contain excessive levels of pollutants (i.e., pesticides, herbicides, hydrocarbons) that are toxic to fisheries and other aquatic life in the streams. In addition, the water drained from the site eventually reaches the Sacramento River, a primary source of water for the City of Sacramento as well as for the Sacramento-San Joaquin Delta, which has numerous water uses such as water supply, recreation, fisheries, and wildlife habitats (Montgomery 1992a).

Water quality degradation from non-point source pollutants is primarily the result of stormwater runoff carrying pollutants from the land surface to the receiving waters. The types of pollutants that may be transported to the receiving waters depend on the land use and the associated land use activities. In the vicinity of DeWitt Center, the urban/commercial uses that may contribute to non-point source pollution include automobiles (tires, oil leaks, brake linings, catalytic converters), the improper use and disposal of chemicals (pesticides, fertilizers, herbicides, paints, paint thinners, solvents, petroleum chemicals), erosion of unprotected surfaces, structural surfaces (street pavement, galvanized pipes, roofing materials, wood preservatives), and solid waste (litter and debris, vegetative matter, pet droppings) (Montgomery 1992a).

Storm runoff originating in the majority of the Study Area drains to North Ravine, then into Auburn Ravine and then into the western Placer County Dry Creek. Storm runoff originating in the northeastern portion of the Study Area drains to the Rock Creek watershed. These surface waters are tributary to the Sacramento River. Key beneficial uses of the receiving waters are designated as municipal, domestic, and agricultural supply, recreation, and freshwater habitat (Central Valley Regional Water Quality Control Board 1998).

Groundwater Supply

As discussed in the 1994 EIR (Planning Concepts 1994), there are no significant sources of groundwater in the vicinity of the project area due to the subsurface conditions. The sedimentary rock unit is of insufficient extent to provide a groundwater resource in the area and the volcanic rock unit is impermeable and contains no groundwater.

11.2 REGULATORY FRAMEWORK

State and Federal Plans, Programs and Policies

The U.S. Army Corps of Engineers (Corps) regulates the placement of fill or dredged materials that affect waters of the United States, which include stream courses and jurisdictional wetlands. The Corps regulates these activities under the authority of Section 404 of the Clean Water Act. The Corps would regulate any development in the vicinity of the project area that affects jurisdictional wetlands.

The Placer County Flood Control and Water Conservation District formulates regional strategies for flood control management. In the Flood Control and Water Conservation District Stormwater Management Manual, policy, guidelines, and specific development criteria are presented for stormwater management. The main objective of the Flood Control and Water Conservation District is to reduce the effects of flooding through best management practices (BMP). The manual addresses the following elements, which must be included in a stormwater management project:

- Drainage structure design - The storm drainage shall be planned and designed so that no damages occur to structures or improvements during the 100-year event and no inundation of private property occurs during the 10-year event;
- Use of detention basins to maintain downstream channel flow rates at 90 percent of the channel capacity;
- Floodplain Management Plan;
- System Monitoring Program; and
- Operations and Maintenance Program.

Surface water quality is regulated by the National Pollutant Discharge Elimination System (NPDES), developed by the U.S. Environmental Protection Agency (EPA) in accordance with Section 303 of the Clean Water Act. In the State of California, the State Water Resources Control Board administers the NPDES program, with implementation and enforcement by the Regional Water Quality Control Board. The NPDES program, designed to protect surface water quality, is applicable to all discharges to waters of the United States, including storm water discharges associated with municipal drainage systems, construction activities, industrial operations, and "point sources" (such as wastewater treatment plant discharges and other direct discharges to water bodies). In April 2003, the State Water Resources Control Board adopted a General Permit for the Discharge of Storm Water from Small Municipal Separate Storm Sewer Systems (MS4s) to provide NPDES permit coverage for smaller municipalities. Placer County is designated within this NPDES Phase II General Permit. In general, the NPDES permit program focuses on controlling, or reducing surface water impacts.

The Central Valley Regional Water Quality Control Board also issues NPDES permits for construction activities involving disturbance of one acre or more. The conditions of the State's General Permit for Storm Water Discharges associated with construction activities require development and implementation of a Storm Water Pollution Prevention Plan that must address the following:

- Plans for implementation of structural and operational BMPs to prevent and control impacts to surface water;
- Inspection and maintenance of BMPs throughout all phases of construction;
- Monitoring of runoff quality during all phases of construction; and
- A plan for preventing and controlling post-construction impacts to runoff quality.

Auburn/Bowman Community Plan

The *Auburn/Bowman Community Plan* contains policies governing development in the project vicinity. Below is a list of hydrology and water quality goals and policies, found in the Environmental Resources Management Element, that are applicable to the DeWitt Government Center Facility Plan (2003 - 2010) project.

Goals IV.B.3.a

1. Conserve and enhance, and protect from degradation, surface and ground water supplies and adequately plan for the development and protection of these resources for future generations
 2. Safeguard and maintain natural waterways to ensure water quality, flora and fauna species diversity and unique wildlife habitat preservation.
 3. Reduce flood hazards both on-site and downstream.
- B.3.b.(1) Improve water quality by eliminating existing water pollution sources and by discouraging activities which include the use of hazardous materials around wetland and groundwater recharge areas.
- B.3.b.(2) Preserve and enhance watersheds, particularly those adjacent to domestic water supply sources. Where urban or suburban development is permitted within such watersheds, require that urban runoff be adequately treated before being released.
- B.3.b.(6) Promote water conservation through development standards, building requirements, landscape design guidelines, and other applicable policies and programs.
- B.3.b.(15) Continue to implement and enforce the *Grading Ordinance* and *Flood Damage Prevention Ordinance*.
- B.3.b.(16) Ensure that new development storm drainage systems are designed in conformance with the Placer County Flood Control and Water Conservation District's *Stormwater Management Manual* and the County *Land Development Manual*.

- B.3.b.(17) Require new development to detain increases in peak stormwater runoff, or to pay appropriate in-lieu fees for compensating improvements, in all areas recommended for local detention in the *Auburn/Bowman Community Plan Hydrology Study* (Appendix D of the Plan's Background Report).
- B.3.b.(18) Reduce the negative impacts on water quality resulting from urban runoff for all commercial, industrial, and residential projects by treating such runoff before it enters intermittent or permanent streams. All feasible mitigation measures should be considered, including, but not limited to, artificial wetlands, infiltration/sedimentation basins, riparian setbacks, oil/grit separators, wet scrubbing of parking areas with a scrubbing/vacuum machine and proper wash water disposal, or other effective Best Management Practices, where appropriate.
- B.3.b.(23) Evaluate potential flood hazards in an area prior to the approval of future development projects.
- B.3.b.(26) Assure that new development conforms to the adopted programs, recommendations, and plans of the Placer County Flood Control and Water Conservation District.
- IV.C.2.p Protect natural areas along creeks and canals through the use of non-development setbacks which may vary according to the significance of the area to be protected. (Where canals are to be enclosed and/or undergrounded, the water quality shall be considered in determining whether naturalized areas along canals shall be protected.)

Placer County General Plan

The *Placer County General Plan* contains the following goals and policies applicable to hydrology and water quality of the DeWitt Government Center Facility Plan (2003 - 2010) project. These policies are found in the Public Facilities and Services and the Natural Resources sections of the General Plan.

- Goal 4.E** To collect and dispose of stormwater in a manner that least inconveniences the public, reduces potential water-related damage, and enhances the environment.
- 4.E.1 The County shall encourage the use of natural stormwater drainage systems to preserve and enhance natural features.
- 4.E.4 The County shall ensure that new storm drainage systems are designed in conformance with the Placer County Flood Control and Water Conservation District's *Stormwater Management Manual* and the *County Land Development Manual*.
- 4.E.5 The County shall continue to implement and enforce its *Grading Ordinance* and *Flood Damage Prevention Ordinance*.
- 4.E.6 The County shall continue to support the programs and policies of the watershed flood control plans developed by the Flood Control and Water Conservation District.

- 4.E.9 The County shall encourage good soil conservation practices in agricultural and urban areas and carefully examine the impact of proposed urban developments with regard to drainage courses.
- 4.E.10 The County shall strive to improve the quality of runoff from urban and suburban development through use of appropriate and feasible mitigation measures including, but not limited to, artificial wetlands, grassy swales, infiltration/sedimentation basins, riparian setbacks, oil/grit separators, and other best management practices (BMPs).
- 4.E.11 The County shall require new development to adequately mitigate increases in stormwater peak flows and/or volume. Mitigation measures should take into consideration impacts on adjoining lands in the unincorporated area and on properties in jurisdictions within and immediately adjacent to Placer County.
- 4.E.12 The County shall encourage project designs that minimize drainage concentrations and impervious coverage and maintain, to the extent feasible, natural site drainage conditions.
- 4.E.13 The County shall require that new development conform to the applicable programs, policies, recommendations, and plans of the Placer County Flood Control and Water Conservation District.
- 4.E.14 The County shall require projects that have significant impacts on the quantity and quality of surface water runoff to allocate land as necessary for the purpose of detaining post-project flows and/or for the incorporation of mitigation measures for water quality impacts related to urban runoff.
- 4.E.15 The County shall identify and coordinate mitigation measures with responsible agencies for the control of storm sewers, monitoring of discharges, and implementation of measures to control pollutant loads in urban storm water runoff (e.g., California Regional Water Quality Control Board, Placer County Division of Environmental Health, Placer County Department of Public Works, Placer County Flood Control and Water Conservation District.)
- Goal 6.A** To protect and enhance the natural qualities of Placer County's streams, creeks and groundwater.
- 6.A.7 The County shall discourage grading activities during the rainy season, unless adequately mitigated, to avoid sedimentation of creeks and damage to riparian habitat.
- 6.A.10 The County shall protect groundwater resources from contamination and further overdraft by pursuing the following efforts:
1. Identifying and controlling sources of potential contamination;
 2. Protecting important groundwater recharge areas;
 3. Encouraging the use of surface water to supply major municipal and industrial consumptive demands;
 4. Encouraging the use of treated wastewater for groundwater recharge; and

5. Supporting major consumptive use of groundwater aquifer(s) in the western part of the county only where it can be demonstrated that this use does not exceed safe yield and is appropriately balanced with surface water supply to the same area.

11.3 IMPACTS

This section discusses and identifies the environmental impacts resulting from the proposed project, and suggests mitigation measures to reduce the level of impact. A detailed discussion of mitigation measures is included in Section 11.4.

Significance Criteria

Based on Appendix G of the CEQA Guidelines, the following significance criteria have been established for evaluating the significance of a project-related hydrology or water quality impact. A hydrology or water quality impact would be significant if any of the following conditions would result from implementation of the proposed project, including demolition, construction and operation phases:

- Violation of any water quality standards or waste discharge requirements;
- Substantial depletion of groundwater supplies or interference with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted);
- Substantial alteration of the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site or substantial increases in the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
- Creation of or contribution to runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- Other substantial degradation of water quality;
- Placement of housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map;
- Placement within a 100-year flood hazard area of structures that would impede or redirect flood flows;
- Exposure of people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam; or
- Inundation by seiche, tsunami, or mudflow.

Project Impacts

Impacts Determined to be Less than Significant

Alteration of Existing Drainage Patterns. The proposed project would not alter existing drainage patterns. The site is located within two watersheds, the North Ravine and Rock Creek watersheds. Grading activities would not alter the watershed boundaries. Stormwater systems would be designed to preserve existing drainage patterns.

Increase in Runoff Volume Leaving the Project Area. The proposed project would result in an increase in the volume of runoff leaving the project area. Development of roads, buildings, and other paved and impermeable surfaces would reduce the amount of storm water that infiltrates into the ground, and would increase the amount of water that runs off of the project area. Building and facility demolition included in the proposed project would slightly offset the increase in water runoff by removing some existing impervious surfaces. Runoff from the project would be collected, conveyed, and detained in the enlarged detention basin. The project includes expanding the DeWitt Center Detention Basin from approximately 30,000 cubic feet of storage to approximately 110,000 cubic feet of storage. The expansion would occur concurrently with earthwork at the Auburn Justice Center (AJC) site, in proposed project Phase C. This would reduce the peak rate of runoff from the site, but these facilities would not reduce the volume of runoff flowing from the site. The project also includes conveyance of runoff from a portion of the Land Development Building (LDB) site to the DeWitt Center Detention Basin through a buried pipe to avoid drainage impacts within the DeWitt Center Study Area. For the northern 5.2 acres of the LDB site that drain to the Rock Creek watershed a separate detention pond is proposed to be created on the LDB site to control runoff from the site.

Due to the low to moderate permeability of the volcanic rock present at the site, it would not be feasible to provide retention facilities that would allow water to infiltrate into the subsurface and thereby reduce the volume of runoff that would leave the site. According to the *Auburn/Bowman Community Plan*, the project is located where detention, not retention, is recommended. With detention storage, flows would be temporarily stored and then released, while with retention storage flows would be stored but not discharged to a watercourse (i.e., flows would be discharged via percolation to the subsurface or via evaporation). It should be noted that the project is designed so that the peak flow rate impacts would be at a less than significant level. As the *Auburn/Bowman Community Plan* designates the project area as one requiring detention and not retention, and the peak flow rate of runoff is controlled through expansion of the detention basin, the increase in runoff volume leaving the site is considered a less than significant impact.

Loss of Groundwater Recharge Opportunity or Reduced Groundwater Quality. The project is not located in a groundwater recharge area and there are no significant sources of groundwater at the site, therefore, there would be no impact to groundwater recharge or quality due to implementation of the proposed facility plan.

Housing or Structures Placed Within a 100-Year Flood Hazard Area. The project is not located within any portion of a 100-year flood hazard area.

Exposure of People or Structures to Flooding, Including Flooding as a Result of the Failure of a Levee or Dam. The project is not located downstream or in the vicinity of a levee or dam that could fail and result in flooding of the site.

Inundation by Seiche, Tsunami, or Mudflow. The project is geographically removed from the potential for seiche, tsunami or mudflow.

Potentially Significant Impacts

Impact 11.1: Reduced Stormwater Runoff Quality During Construction

Significance Before Mitigation:	Potentially Significant
Mitigation:	11.1a through 11.1f
Significance After Mitigation:	Less than Significant

The grading involved in preparing the LDB and AJC sites for construction would decrease vegetative cover and increase the potential for soil erosion, and thereby could cause an increase in suspended solids in runoff and local receiving waters. Demolition of buildings and structures at the LDB site, between C and D Avenues, and the decommissioned Wastewater Treatment Plant (WWTP) site would also increase the potential for erosion (see *Figure 2-5* for the location of these sites). As part of the proposed facility plan, the County also intends to grade the Children's Emergency Shelter and Women's Center (CES and WC) sites for future development. In addition to impacts from erosion, impacts to runoff water quality during construction could potentially result from leaks or spills of fuel or hydraulic fluid used in construction equipment; outdoor storage of construction materials; or spills of paints, solvents, and other potentially hazardous materials commonly used in construction. Impacts and mitigation measures related to potential releases of hazardous materials are discussed in **CHAPTER 14, HAZARDS AND HAZARDOUS MATERIALS**.

The LDB site is currently occupied by several buildings and temporary structures, which are interspersed with a variety of ornamental trees, shrubs and lawn. All of the buildings would be demolished to accommodate the new LDB and associated parking lot. The entire site would be regraded. A grading plan for the LDB site would be submitted to the Department of Public Works for approval prior to issuance of a grading permit. Temporary and permanent BMPs to avoid and minimize potential stormwater runoff pollution during demolition and construction would be included on the grading plan.

Most of the AJC site is currently vacant and is characterized by a high level of disturbance as a result of previous grading operations in the vicinity. There are a few small parking lots and roadways on the site. Scattered trees exist on portions of the site, and a wetland swale exists in the southern portion of the site, which flows to a culvert passing under the Main Jail facility. The AJC site slopes down gradually from the northeast and would require cut and fill areas to provide level building areas. A grading plan for the AJC site would be submitted to the Department of Public Works for approval prior to issuance of a grading permit. Temporary and permanent BMPs would be included on the grading plan.

The proposed project also includes the demolition of several buildings between C and D Avenues, four buildings north of B Avenue, and the decommissioned WWTP and associated facilities northwest of the Main Jail facility. There would be essentially no regrading at the

building demolition sites. At the WWTP site, the existing facilities would be demolished, but many areas of concrete pads and floors would remain at the site. One-foot diameter holes would be drilled through the remaining concrete to allow some infiltration of stormwater. The WWTP would be graded to promote sheet flow of the water that does not infiltrate towards the west and into the existing sewer pond. A grading plan for the WWTP site would be submitted to the Department of Public Works for approval prior to issuance of a grading permit. Temporary and permanent BMPs to control potential impacts to stormwater quality during and after demolition would be included on the grading plan.

The CES and WC sites are currently undeveloped and covered in vegetation. They are located southwest of the decommissioned WWTP's sewer pond. A grading plan for the CES and WC sites would be submitted to the Department of Public Works for approval prior to issuance of a grading permit. Temporary and permanent BMPs would be included on the grading plan. Once the sites have been graded, the surface would be hydroseeded or covered with vegetation or other protective surface material to minimize the potential for erosion, as required by *Mitigation Measure 11.1a*. For surfaces that are not revegetated, the County would provide other BMPs to minimize discharge of sediments offsite such as filter strips or vegetated swales, as required in *Mitigation Measure 11.1a*. Subsequent project-level environmental reviews of construction plans for both facilities will assess additional hydrologic and water quality impacts of the proposed facilities.

Sediment generated by demolition, grading, or construction activities for the proposed project would be contained on each construction and demolition site and controlled using BMPs. Once each proposed construction project is completed, each site would be covered with asphalt, landscaping, and buildings, so that sediment production would be negligible. Rough grading plans have been prepared for the LDB and the AJC. Cuts and fills at the LDB site are expected to be a maximum of 30 inches, with a total of 5,000 cubic yards of soil moved. Cuts and fills at the AJC site are expected to have a maximum depth of ten feet, with the majority of the cuts and fills being six feet or less with a total of $\pm 12,500$ cubic yards of soil moved. Preliminary drainage plans have not been prepared for the proposed construction projects under consideration but will be submitted to the Department of Public Works for approval prior to issuance of a grading permit. Final grading plans will include all proposed grading, drainage improvements, vegetation and tree removal. The County will prepare these plans in accordance with the provisions of the Placer County Grading Ordinance as described in *Mitigation Measures 11.1a* prior to issuance of any grading or demolition permits.

Construction activities involving the disturbance of one or more acres are required to apply for coverage under the State Water Resources Control Board NPDES General Permit for Storm Water Discharges Associated with Construction Activities. To obtain coverage under the permit, the County would submit a Notice of Intent with the required permit fee and prepare a project-specific Storm Water Pollution Prevention Plan (SWPPP). The SWPPP would include the following four major objectives:

1. Identify pollutant sources, including sources of sediment, that may affect the quality of storm water discharges from the construction site;
2. Identify non-storm water discharges;

3. Identify, construct, implement in accordance with a time schedule, and maintain BMPs to reduce or eliminate pollutants in storm water discharges and authorized non-storm water discharges, from the construction site during construction; and
4. Identify, construct, implement in accordance with a time schedule, and assign maintenance responsibilities for post-construction BMPs, which are those measures to be installed during construction that are intended to reduce or eliminate pollutants after construction is completed.

As described in *Mitigation Measure 11.1c*, the SWPPP would include a project-specific plan for preventing impacts to water quality through the use of structural and/or operational BMPs during construction.

Potential significant impacts to water quality due to construction activities would be mitigated to a less than significant level by preparing final grading plans and landscaping plans for each project site in accordance with the provisions of the Placer County Grading Ordinance and by implementing a SWPPP developed in accordance with the requirements of the NPDES General Permit for Storm Water Discharges Associated with Construction Activities.

Impact 11.2: Increase in Runoff Rate Downstream of the Site

Significance Before Mitigation:	Potentially Significant
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Mitigation:	11.2a and 11.2b
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Significance After Mitigation:	Less than Significant
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The proposed new construction of buildings and parking lots would result in an increase in impervious surfaces within DeWitt Center. To accommodate the increase in runoff resulting from development of the proposed project, specifically the LDB and AJC sites, the existing stormwater detention basin west of the Main Jail would be enlarged and a new detention basin would be created in the northwest corner of the LDB site. The basins and associated conveyance infrastructure would be designed to be in conformance with the applicable programs, policies, recommendations, and plans of the Placer County Flood Control and Water Conservation District, such as the Storm Water Management Manual (SWMM).

The majority of stormwater runoff from the entire DeWitt Center drains to the existing DeWitt Center Detention Basin (built in 2001) west of the Main Jail, north of Atwood Road (see *Figure 11-2*). Water leaving this basin flows to the Atwood Road Detention Pond south of the Main Jail and then through a culvert under Atwood Road to a pond on the south side of Atwood Road (NFA 2002). From there, the stormwater is conveyed via natural drainage features, eventually entering North Ravine.

Currently, runoff from the southern portion of the AJC site, approximately 8 acres, drains through the wetland swale on that site and is conveyed to the Atwood Road Detention Pond through the existing 48-inch culvert under the jail. The Atwood Road Detention Pond also collects runoff from the 9-acre area immediately surrounding this pond. No changes to the location of this runoff are proposed. However, runoff volume from the AJC site is expected to increase following construction of the AJC.

Currently, runoff from approximately 3.5 acres of the LDB site and the northern portion of the AJC site as well as the site of the existing Finance Administration Building is collected in a ditch that bypasses the wetland swale on the southern portion of the AJC site. This ditch conveys the runoff to a 42-inch culvert that empties into the DeWitt Center Detention Basin. The proposed project includes provision of a new underground storm drain system to replace the existing ditch for conveyance of post-project runoff volumes.

Approximately 5.2 acres of the 8.8-acre LDB site currently drains towards the north and is part of the Rock Creek drainage area. The proposed LDB project includes creation of a new detention pond in the northwest corner of the LDB site to accommodate the increase in runoff volume to this watershed. The onsite storm drain systems would include catchment basins in the parking lots.

County staff has prepared a preliminary estimate (Appendix F of this EIR) of the amount of additional storage that would be required at the DeWitt Center Detention Basin to accommodate runoff from the AJC and LDB sites (Department of Facility Services [DFS] 2003). Based on the results of the calculations, the DeWitt Center Detention Basin, which currently provides approximately 30,000 cubic feet of storage capacity, would be enlarged to provide approximately 110,000 cubic feet of storage capacity to accommodate the runoff from a 100-year storm event. The existing 12-inch-diameter outlet pipe would be shortened as the pond is enlarged and a new outlet structure would be designed to adequately control the flows for all storm events (2-year through 100-year) to less than pre-development flows consistent with Placer County's SWMM. The soil excavated from the Detention Basin (approximately 80,000 cubic feet) would be deposited throughout DeWitt Center, in part as fill for permitted fills of wetlands, as discussed in **CHAPTER 9, BIOLOGICAL RESOURCES**, and in part as fill/topsoil for the proposed demolition sites. Identification of fill amounts and placement for the soil removed from the detention basin site would be included on the grading plans for the detention basin work which would be submitted to the Department of Public Works for review and approval prior to issuance of a grading permit, as required by *Mitigation Measure 10.3d*, which is incorporated in this chapter by reference in *Mitigation Measure 11.2a*.

The new basin on the LDB site would consist of two 4-foot deep depressions connected by an 18-inch diameter pipe. The proposed basin configuration would provide clearance for an existing joint utility trench that passes through the proposed basin area. Based on preliminary estimates by County staff, the new basin would provide approximately 13,000 cubic feet of storage capacity to accommodate the runoff from a 100-year storm event. The pond outlet control structure would connect to an existing 18-inch diameter storm drain near the intersection of Bell Road and Richardson Road. The outlet control structure would have a 12-inch diameter outlet pipe and would be designed to control discharges in accordance with Placer County's SWMM (i.e., discharge would be less than pre-development flows).

AR Associates prepared an analysis of the pre-project and post-project peak stormwater runoff flows using the HEC-1 computer program based on the conceptual development plans and the County staff estimations of the amount of expansion of the DeWitt Center Detention Basin. The results of the modeling are as shown in *Table 11.2* below. This analysis found that the expansion of the DeWitt Center Detention Basin would reduce peak flows of stormwater runoff resulting from the proposed project to levels at or below the pre-project conditions and would lower the

elevation of water surface in the Atwood Road Detention Pond during the 100-year storm event by 0.1 foot. This would not eliminate the overtopping of Atwood Road during a 100-year storm event, but would slightly lessen the amount of flooding that currently would be expected to occur. The results also indicate that the new detention basin on the LDB site would reduce peak flows from the proposed project to levels below pre-project conditions.

Table 11.2
Summary of Peak Flows and Maximum Water Surface Elevation for Pre- and Post-Development Conditions

Development Comments										
	Peak Flows (cubic feet per second)								Maximum Water Surface Elevation (feet)	
Location	100-Year		25-Year		10-Year		2-Year		Pre Q100	Post Q100
	Pre	Post	Pre	Post	Pre	Post	Pre	Post		
Dewitt Center Detention Basin System										
A1	129	134	96	11	72	76	35	37		
DeWitt Center Detention Basin	109	79	84	62	67	50	35	25		1396.96
A2	15	23	11	17	8	13	4	7		
A3	34	40	25	30	19	22	9	11		
COMB	138	105	105	82	83	64	43	32		
Atwood Road Detention Pond	98	77	53	51	46	43	28	26	1390.98	1390.88
Land Development Building Basin										
B1	12	6	8	5	64	4	3	2	N/A	1428.63

Notes:

The location abbreviations indicate the subbasins as marked on Figure 11-2.

A1 is the 45 acre area that includes the southern portion of the LDB site and the northern portion of the AJC site. A1 also includes the 3-acre area immediately surrounding the DeWitt Center Detention Basin.

A2 is the 8-acre subbasin in the southern portion of the AJC site. That drainage would be conveyed through the existing 48 inch culvert under the Main Jail to the Atwood Road Detention Pond.

A3 is the 9-acre subbasin surrounding the Atwood Road Detention Pond.

COMB represents the inflow into the Atwood Road Detention Pond and is the combination of basins A2 and A3 plus the routed outflow of basin A1 through the DeWitt Center Detention Basin.

B1 is the northern 5.2 acres of the LDB site. The post development values represent the outflows and water surface elevations for the new detention basin.

Source: AR Associates 2003

Demolition of the buildings between C and D Avenues and north of B Avenue and the decommissioned WWTP facility would remove impervious surfaces and therefore result in decreasing peak runoff from these sites. The preliminary drainage calculations performed for enlarging the DeWitt Center Detention Basin did not account for these decreased flow rates. However, these decreases would not be sufficient to significantly reduce the need for additional storage at the expanded detention basin.

During design, the County would be required to prepare and submit drainage analyses and plans for all of the proposed sites in accordance with the SWMM as described in *Mitigation Measure 11.2b*. To accommodate the increased flow rates from the LDB and AJC sites, the existing DeWitt Center Detention Basin would be enlarged and a new detention basin would be created on the LDB site. Because both of these basins would be designed in accordance with the SWMM that requires post development flows to be less than pre-project flows, impacts from the proposed project are considered less than significant. With respect to the CES and WC sites, the County plans to do the rough site grading and provide infrastructure (i.e., roadway, water and sewer lines). However, the facilities would be designed and constructed in the future. As such, the potential impacts due to the development of the CES and WC projects can only be assessed at the programmatic level at this time, with more thorough review of the impacts to be done in the future.

Currently the CES and WC sites are vacant land, but once developed would be covered with buildings and parking lots. Similar to the LDB and AJC sites, the development of the CES and WC sites would increase the amount of impervious area and increase peak runoff rates. Drainage analyses for these sites have not been completed, but would be required in order to assess potential impacts. Because there would be an increase in impermeable surfaces and an increase in runoff rate, stormwater detention designed in accordance with the Placer County SWMM would be required as mitigation and the impacts would be expected to be less than significant.

Impact 11.3: Reduced Storm Water Quality During Operations

Significance Before Mitigation:	Potentially Significant
Mitigation:	11.3a
Significance After Mitigation:	Less than Significant

Development has the potential to create adverse impacts on the water quality of streams. Potential impacts from urban and commercial land uses include increased hydrocarbon levels from increased automobile traffic, increased nutrients from landscaping activities, and increases in other pollutants associated with urban runoff.

As part of EPA's National Pollutant Discharge Elimination System (NPDES) storm water program, EPA recently established the Storm Water Phase II Rule for municipalities with populations of less than 100,000 to develop storm water management programs as a means to control polluted discharges. In April 2003, the State Water Resources Control Board adopted a General Permit for the Discharge of Storm Water from Small Municipal Separate Storm Sewer Systems (MS4s) to provide NPDES permit coverage for smaller municipalities. Placer County is designated within this NPDES Phase II General Permit and is preparing a stormwater management program in accordance with the requirements of the NPDES II permit. Under the Phase II Rule, stormwater management programs are to be developed that will reduce the discharge of pollutants to the "maximum extent practicable" (MEP), protect water quality, and satisfy the appropriate water quality requirements of the Clean Water Act. The stormwater management program consists of six elements that, when implemented in concert, are expected to result in significant reductions of pollutants discharged into receiving waterbodies. These six elements are: 1) public education and outreach, 2) public participation and involvement, 3) illicit

discharge detection and elimination, 4) construction site runoff control, 5) post-construction runoff control and 6) pollution prevention and good housekeeping.

In accordance with NPDES II requirements, project designs will be required to incorporate BMPs as described in *Mitigation Measure 11.3a* to reduce the discharge of stormwater pollution to the MEP. Potential significant impacts to water quality during operations would be mitigated to a less than significant level by designing the project to include appropriate and effective BMPs.

11.4 MITIGATION MEASURES

Reduced Storm Water Quality During Construction

Mitigation Measure 11.1a: Implement *Mitigation Measure 10.1a*, which requires indication on Grading Plans for each project site of the extent of proposed grading, drainage improvements, and vegetation removal.

Mitigation Measure 11.1b: Implement *Mitigation Measure 5.2a*, which requires revegetation and/or covering of demolition sites to minimize erosion.

Mitigation Measure 11.1c: Implement *Mitigation Measure 7.1a*, which requires the submittal of a Construction Emission/Dust and Erosion Control Plan that includes specific Best Management Practices.

Mitigation Measure 11.1d: Implement *Mitigation Measure 9.3c*, which requires additional Best Management Practices to control erosion and sedimentation of onsite drainageways.

Mitigation Measure 11.1e: Implement *Mitigation Measure 10.1f*, which requires implementation of additional Best Management Practices.

Mitigation Measure 11.1f: The County shall prepare and implement a Stormwater Pollution Prevention Plan (SWPPP) for every construction phase. The SWPPP will include development of site-specific structural and operational BMPs to prevent and control impacts to runoff quality, measures to be implemented before each storm event, inspection and maintenance of BMPs, and monitoring of runoff quality by visual and/or analytical means. The Regional Water Quality Control Board will issue Waste Discharge Requirements (WDRs) which set forth conditions, discharge limitations, and monitoring and inspection requirements with which the County will comply. Several BMPs that could be used during construction are described in the *Auburn/Bowman Community Plan*, Appendix D, Hydrology Study. (The contents of the SWPPP are set forth in detail in the permit application package, Montgomery 1992). The California Stormwater BMP Handbook for Construction (California Stormwater Quality Association, 2003a) also provides example of BMPs that could be used. BMPs that may be included in the SWPPP are:

- a. Scheduling materials deliveries to provide for minimal onsite storage and/or providing covered storage for materials wherever practical;

- b. Designating specific areas for overnight equipment storage and maintenance and providing runoff control around those areas to minimize the potential for runoff to contact spilled materials;
- c. Establishing procedures for daily work site cleanup and prepare and implement a Spill Mitigation Plan for construction-related activities (*a portion of this measure is also listed as Mitigation Measure 14.1b*);
- d. Developing a program of site inspections to ensure that BMPs are consistently implemented and effective;
- e. Conducting visual monitoring of runoff quality at selected monitoring points;
- f. Placing fiber rolls (wattles) around drain inlets to prevent sediment and construction-related debris from entering the inlets;
- g. Placing fiber rolls (wattles) along the perimeter of the site to reduce runoff flow velocities and prevent sediment from leaving the site;
- h. Placing silt fences downgradient of disturbed areas to slow down runoff and retain sediment;
- i. Placing sandbags around potentially affected off-site inlets to prevent sediments from entering the inlets; and
- j. Specifying that all disturbed soil will be seeded, mulched, or otherwise protected by October 15.

Increase in Runoff Rate Downstream of the Site

Mitigation Measure 11.2a: The County shall implement *Mitigation Measure 10.3d*, which requires that the grading plan for the Auburn Justice Center site and DeWitt Center Detention Basin expansion shall include prescriptive practices for placement of all of cut soil not used as fill within the same project site.

Mitigation Measure 11.2b: The County shall comply with Placer County Flood Control and Water Conservation District's *Stormwater Management Manual* (SWMM) and the *County Land Development Manual* for all design and construction of storm drainage systems. The SWMM provides policy, guidelines, and specific criteria for the development and management of stormwater facilities and infrastructure. The following are some of the requirements that would be applicable to the drainage studies for the proposed project.

- a. Avoid increasing the storm drainage problems in the area, or transferring drainage problems from one location to another. Watershed boundaries should not be altered, and flows should not be diverted from one watershed to another without compelling reasons.
- b. Design the stormwater system such that no damages occur to structures or improvements during the 100-year event and no inundation of private property occurs during the 10-year event. The 10-year event is the minimum design storm for new developments and all dedicated drainage facilities will be sized for this event.

- c. Design the stormwater system such that the peak flows will be reduced to below pre-project conditions for 2-year through 100-year storm events.
- d. Prepare hydrologic analysis in accordance with the guidelines provided in the SWMM. For example, SWMM recommends that the computer program HEC-1 be used to compute both the peak flow and runoff volume for the various storm events, as well as route the design storms through the proposed detention facility, to evaluate the effectiveness of the project.
- e. Provide details (e.g. location and typical details) on how stormwater runoff is collected and conveyed to the stormwater system.
- f. Provide drainage facilities that minimize drainage concentration.
- g. Provide energy dissipators at all points where drainage becomes concentrated.
- h. Prepare a Drainage Plan for each site and submit to the Placer County Flood Control and Water Conservation District for review and approval. The SWMM provides a detailed list of the information that should be included in the Preliminary and Final Drainage Plans.

The County will prepare a drainage study that addresses each of the proposed project sites in accordance with the Placer County Flood Control and Water Conservation District's (SWMM). Compliance with Placer County's design manuals for storm drainage systems will ensure that post-project peak flow rates will be less than pre-project peak flow rates and therefore, impacts to downstream areas will be minimized.

Reduce Storm Water Quality during Operations

Mitigation Measure 11.3a: The County will prepare and implement a post-development Stormwater Management Plan (SWMP) under the guidelines established by the Placer County Flood Control and Water Conservation District's Stormwater Management Manual (SWMM) and in accordance with the NPDES Phase II Rule. The components of the SWMP will include protection from flooding, protection and enhancement of the stream environment, prevention of erosion and adverse effects on water quality, incorporation of regional stormwater management goals, creation of multiple resource use, and assurance of the growth and development of the project to minimize its adverse impacts. BMPs will be included in the plan, as well as a mitigation monitoring program to ensure long-term success of the BMPs. The California Stormwater BMP Handbook for New Development and Redevelopment (California Stormwater Quality Association, 2003b) provides guidance for selecting and implementing BMPs, as well as information on the potential effectiveness of BMPs on pollutant control. Examples of BMPs that could be incorporated into the SWMP include the following.

- a. Litter control and solid waste management,
- b. Street cleaning,
- c. Design parking lots to direct stormwater to storm drain inlets and away from garbage disposal areas,

- d. Incorporate landscaping into the design,
- e. Prevent contact of stormwater with potentially contaminated facilities either by redirecting flows or providing other protection, and
- f. Develop and implement a maintenance program for the storm drain system and stormwater detention basins.

The purpose of this mitigation measure is to provide a plan for ensuring that structural BMPs constructed as part of the proposed project are maintained appropriately such that they continue to perform their intended function as long as the project site is occupied. Placer County is operating under a new NPDES Phase II Rule permit that addresses stormwater discharges in the county. The SWMP will address site-specific drainage characteristics, stormwater conveyance systems, discharge points, potential sources of runoff quality impacts, specific structural BMPs that have been constructed as part of the project, recommended operational BMPs, a maintenance program for structural BMPs, a monitoring program designed to evaluate the need for BMP modifications or additional BMPs, and identification of specific parties responsible for implementing each part of the plan. Specific BMPs will be developed based upon the Placer County SWMM, requirements of the Placer County General Plan, and State Water Resources Control Board general guidelines for development of BMPs. Due to the low permeability of the soils at the site, BMPs that rely on infiltration (i.e., porous pavement, infiltration trenches, infiltration basins) would not be appropriate for the project area (Montgomery 1992a).

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